# Water heater

Webasto
Feel the drive

## *Thermo Top C* Parking Heater

e1
00 0002

# Installation documentation

# Toyota Hilux

Diesel
from Model Year 2005
For left-hand drive vehicles only
2WD / 4WD
5 gear manual transmission
5 gear automatic transmission

**WARNING!**

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.

Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems.
Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

**NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.**

ALWAYS follow all Webasto installation and repair instructions and observe all warnings.

**The initial startup is to be executed with the Webasto Thermo Test Diagnosis.**

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.

Ident. No.: 1310486G_EN Fee Euro 10.00

## Table of Contents



## Validity

| Manufacturer | Model | Type | ABE / EG BE No. |
|---|---|---|---|
| Toyota | Hilux | N15 | L641 |
| Toyota | Hilux | MT | L643 |
| Toyota | Hilux | N25S | L642 |
| Toyota | Hilux | N25S | e11 * 2007 / 46 * 0148 * ... |
| Toyota | Hilux | N25T | L643 |
| Toyota | Hilux | N25T | e11 * 2007 / 46 * 0149 * ... |
| Toyota | Hilux | N2 | e11 * 2007 / 46 * 0148 * ... |

| Engine type | Engine model | Output in kW | Displacement in cm³ |
|---|---|---|---|
| 2KD-FTV | Diesel | 75 | 2494 |
| 2KD-FTV | Diesel | 88 | 2494 |
| 2KD-FTV | Diesel | 106 | 2494 |
| 1KD-FTV | Diesel | 126 | 2982 |

Vehicle and engine types and equipment versions not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.
The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

## Heater/Installation Kit

| Quantity | Designation | Order No.: |
|---|---|---|
| 1 | Retail accessories *Thermo Top C* | See price list |
| 1 | Installation kit for Toyota Hilux Diesel | 1310483F |
| 1 | Heater control | See price list |

**Also required with automatic air-conditioning:**

| Quantity | Designation | Order No.: |
|---|---|---|
| 1 | Kit for automatic air-conditioning on Toyota Hilux | 1314776C |

## Foreword

This installation documentation applies to the Toyota Hilux vehicles with Diesel engine - for validity, see page 2 - from model year 2005 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

In any case, please follow the specifications of this "installation documentation" and the "operating and installation instructions" of the *Thermo Top C*.
The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

## General Instructions

Installation should be carried out according to the general standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties.
Sharp edges should be fitted with rub protection (split-open fuel hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

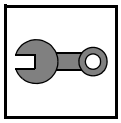
## Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit

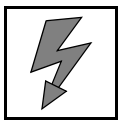
## Explanatory Notes on Document

To provide you with a quick overview of the individual working steps, you will find an identification mark on the outside top right corner of the page in question.

**Mechanical system**

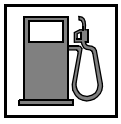


**Electrical system**

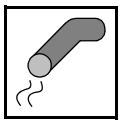


**Coolant circuit**

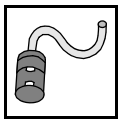
**Fuel**



**Exhaust gas**



**Combustion air**



Special features are highlighted using the following symbols:

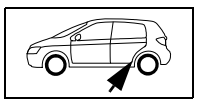
Specific risk of injury or fatal accidents.

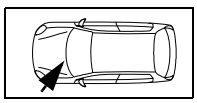
Specific risk of damage to components.

Specific risk of fire or explosion.

Reference to general installation instructions of Webas- to components or to the manufacturer's vehicle-specific documents.

Reference to a special technical feature.





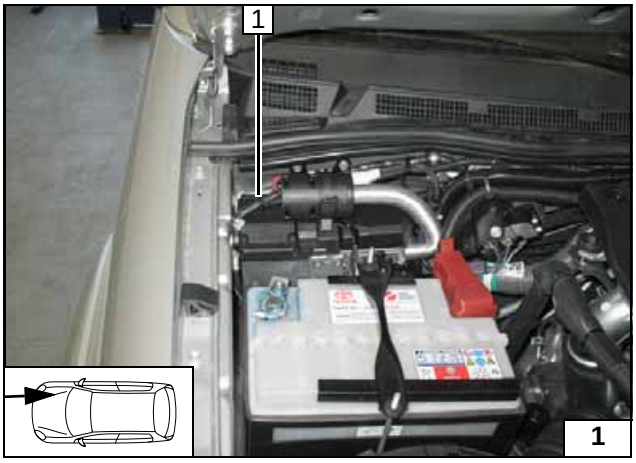
The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

## Preliminary Work

**WARNING!**

- Disconnect both batteries.
- Depressurise the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Completely remove the battery on the right.
- Remove the engine cover.
- Remove intercooler (installation aid during coolant routing).
- Remove the coolant reservoir cap on the right.
- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Remove the A/C control panel (only with automatic air-conditioning).
- Remove the lower instrument panel trim on the left.

Remove page 36 "Operating Instructions for End Customer" and add to the vehicle operating instructions.




## Heater installation location

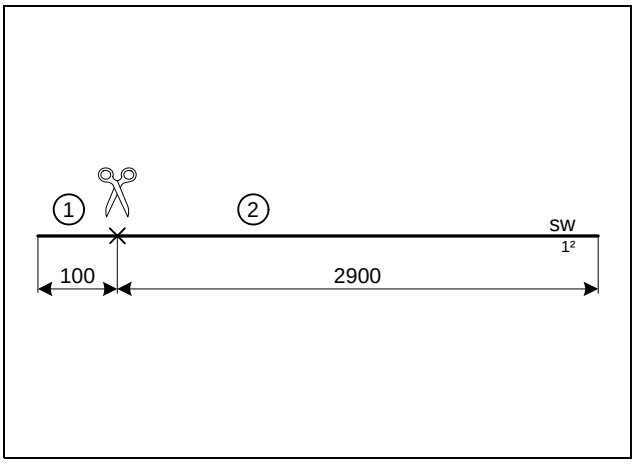
**1** Heater

## Preparing electrical system

Wire sections retain their numbering in the whole document.

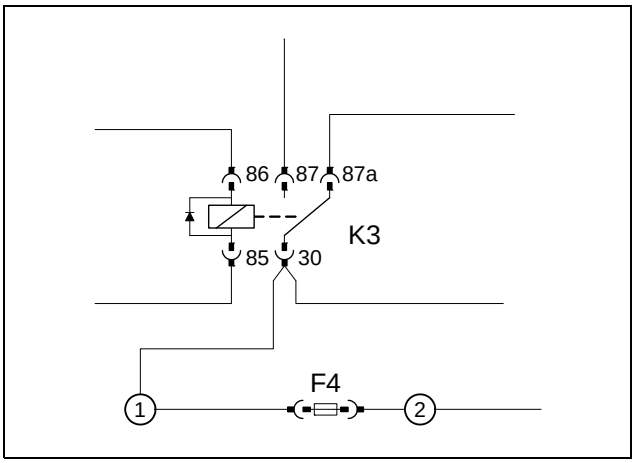
**Only with automatic air-conditioning**

**Cutting wire to length**




Produce connections as shown in wiring diagram. Pull wire section **2** and into protective sleeving provided.

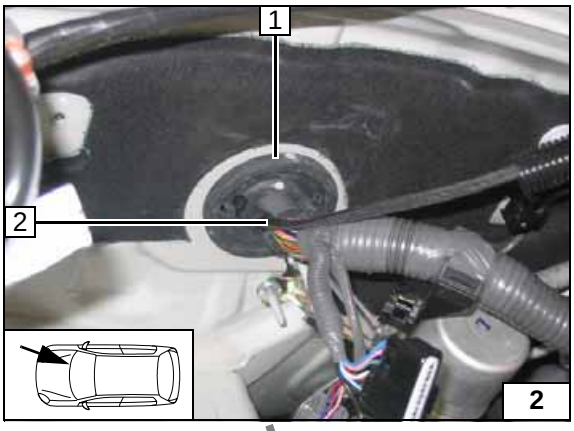
**Preparing fuse F4**



## Electrical Connections

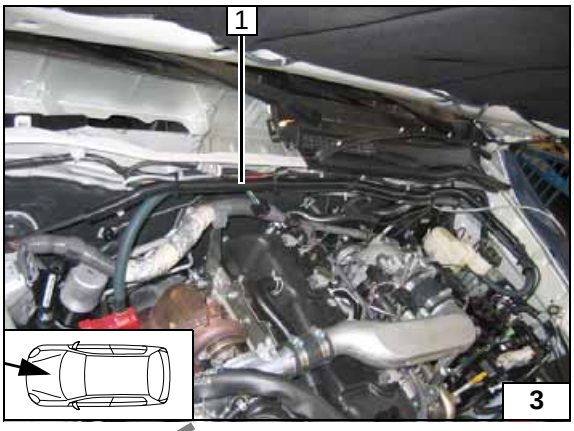
### Right-hand wiring harness pass through

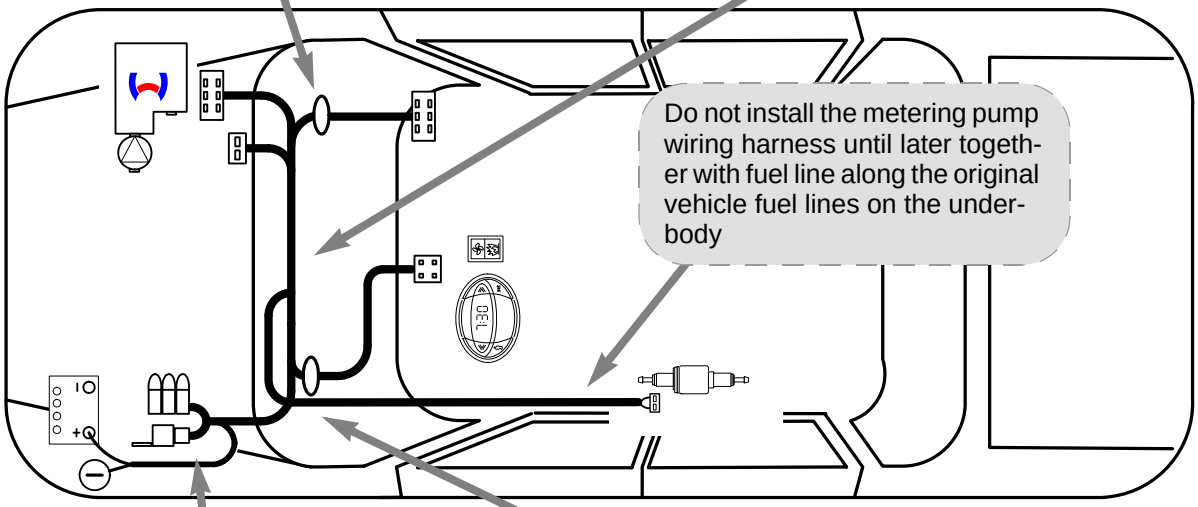
**1** Protective rubber plug
**2** Wiring harness of fan control



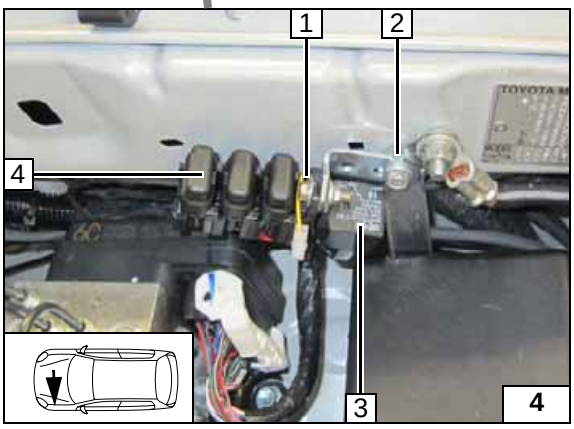

### Routing wiring harness in engine compartment

**1** Included corrugated tube with wiring harness and Mecanyl fuel line



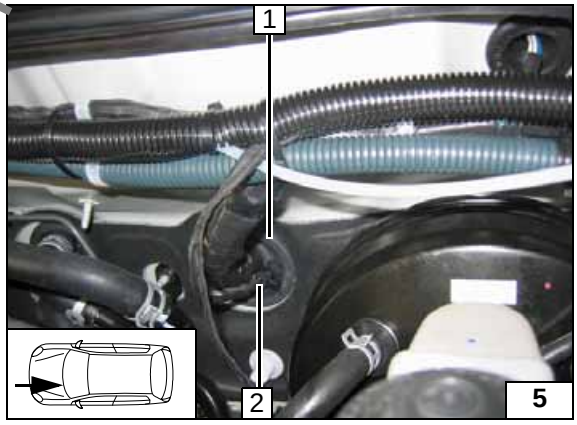




Wiring harness routing diagram




### Fuse holder, K3 relay

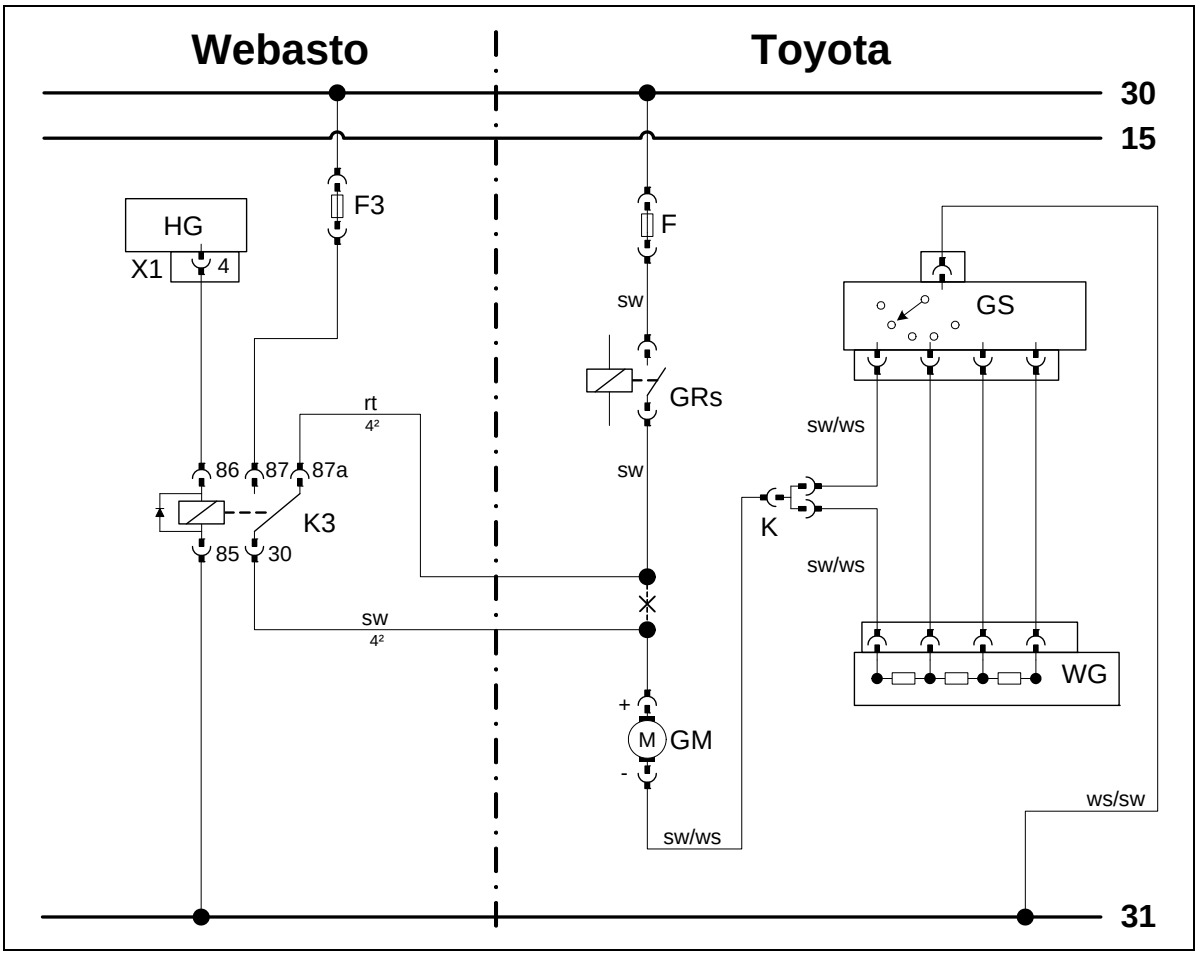
**1** M5x16 bolt, washer, retaining plate for fuse holder, washer, flanged nut
**2** Original vehicle bolt, angle bracket, 5 mm spacer
**3** K3 relay
**4** Fuse holder




### Left-hand wiring harness pass through

**1** Protective rubber plug
**2** Wiring harness of heater control

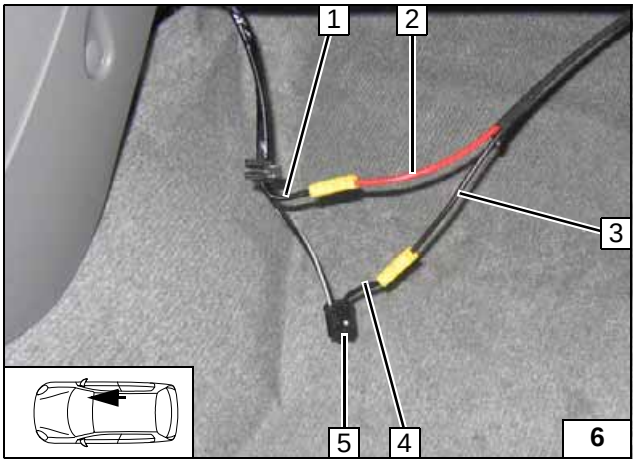
## Fan control for manual air conditioning




Wiring diagram

| Webasto components | | Toyota Hilux components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | Heater TT-C | GM | Fan motor | rt | red |
| F3 | 25A fuse | GS | Fan switch | ws | white |
| K3 | Fan relay | WG | Resistor group | sw | black |
| | | GRs | Fan relay | br | brown |
| | | F | HTR 40 A fuse | gn | green |
| | | K | Cable connector J18/J19 | | |
| | | | | | |
| | | | | **X** | Cutting point |
| | | | | Wiring colours may vary. | |

Legend



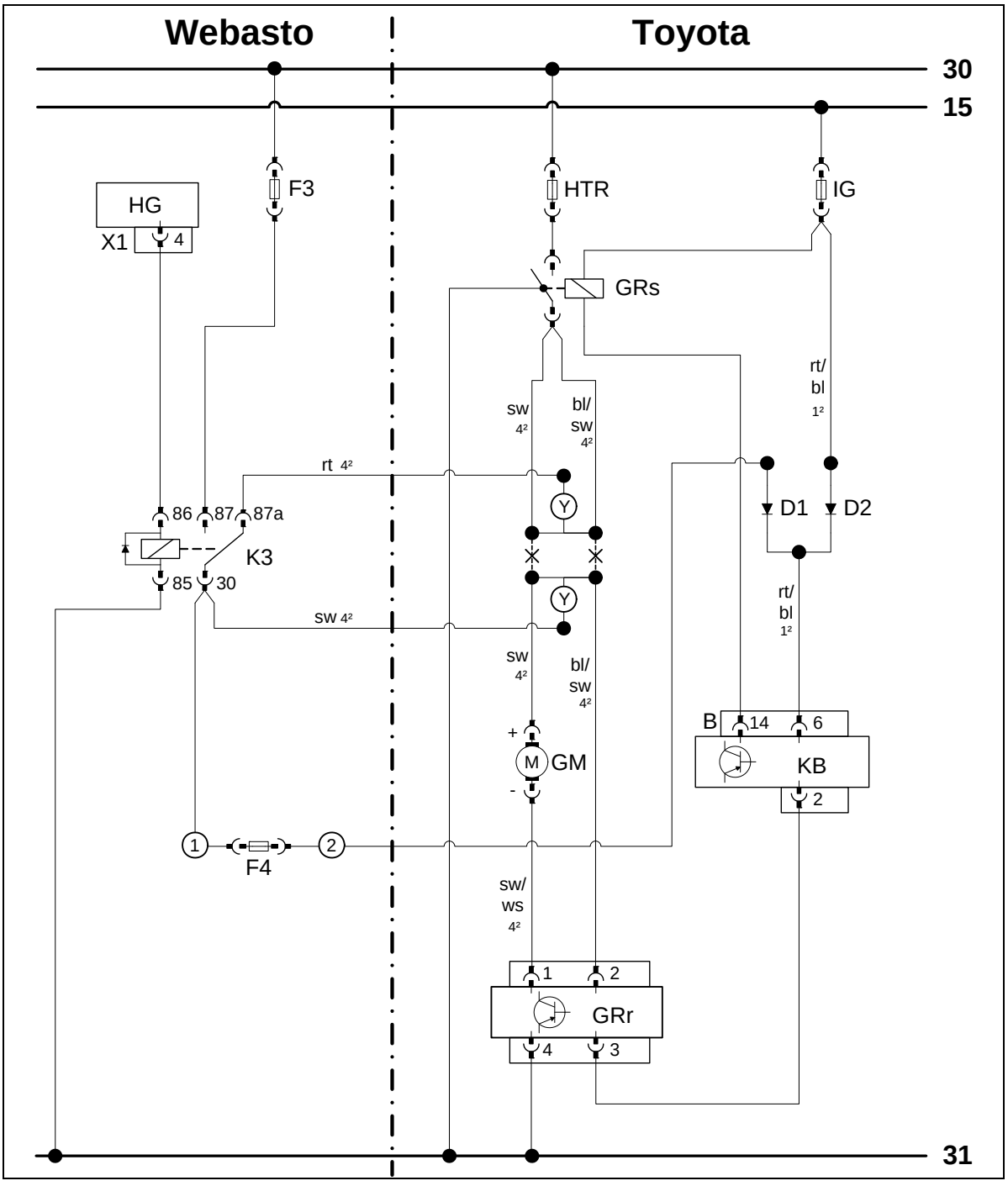

Connection to 2-pin connector **5** from the fan motor.
Produce connections as shown in wiring diagram.

**1** Black (sw) wire of GRs
**2** Red (rt) wire of K3/87a
**3** Black (sw) wire of K3/30
**4** Black (sw) wire of 2-pin GM connector

Connecting fan motor

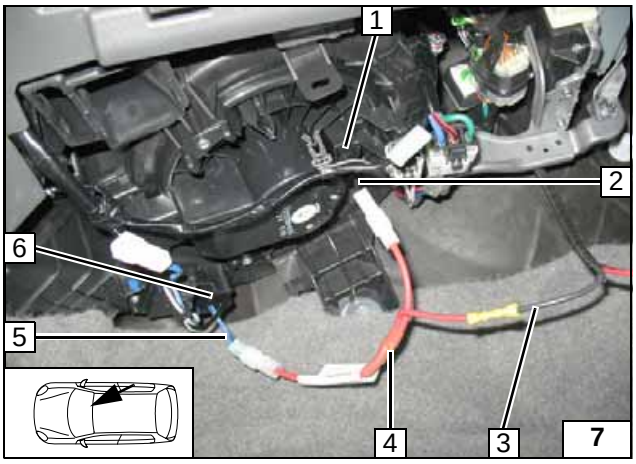
## Automatic air-conditioning fan control

**Wiring diagram**




| Webasto components | | Toyota Hilux components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | Heater TT-C | GM | Fan motor | rt | red |
| F3 | 25A fuse | KB | A/C control panel | ws | white |
| K3 | Fan relay | GRr | Fan controller | sw | black |
| F4 | Additional 10A fuse | GRs | Fan relay | br | brown |
| D1 | Diode 3A | HTR | 40A fuse | gn | green |
| D2 | Diode 3A | IG | 10 A fuse | bl | blue |
| Y | Power adapter | B | 24-pin connector KB | | |
| | | | | ! | Insulate wire ends and tie back |
| | | | | | |
| | | | | X | Cutting point |
| | | | | Wiring colours may vary. | |

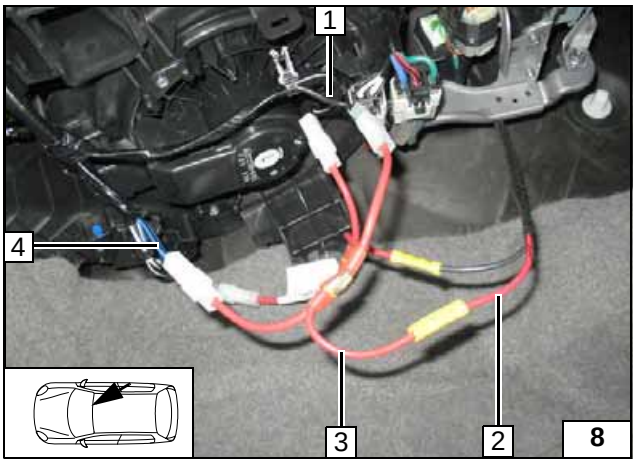
**Legend**




Connection to 2-pin connector **1** of fan motor and to 4-pin connector **6** of fan controller. Produce connections as shown in wiring diagram.

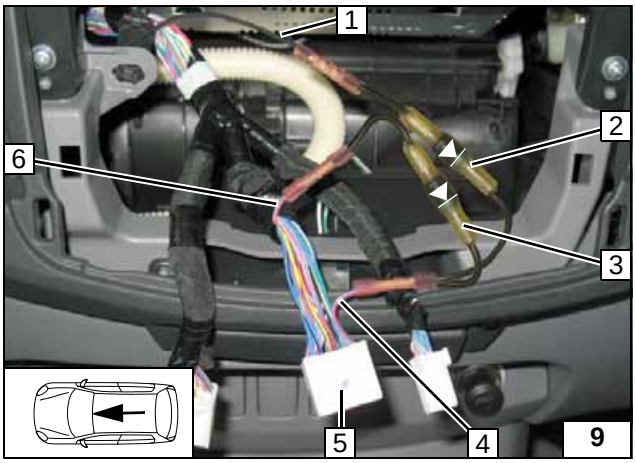
**2** Black (sw) connector of fan motor
**3** Black (sw) wire of K3/30
**4** Power adapter
**5** Blue/black (bl/sw) wire of fan controller connector

**Connecting fan motor**




**1** Black (sw) wire of fan relay
**2** Red (rt) wire of K3/87a
**3** Power adapter
**4** Blue/black (bl/sw) wire of fan relay

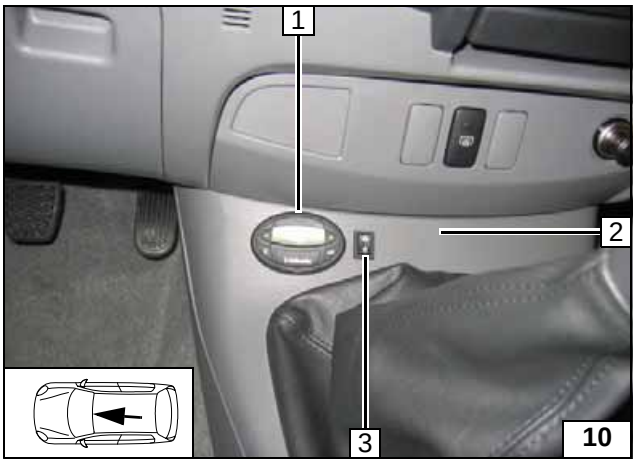
**Connecting fan motor**




Connection to 24-pin connector **B** (A37) from the A/C control panel. Watch direction of flow of diodes. Produce connections as shown in wiring diagram.

**1** Black (sw) wire from F4 fuse
**2** Diode D1
**3** Diode D2
**4** Red/blue (rt/bl) wire of Pin 6, Connector B
**5** Connector B
**6** Red/blue (rt/bl) wire from fuse IG

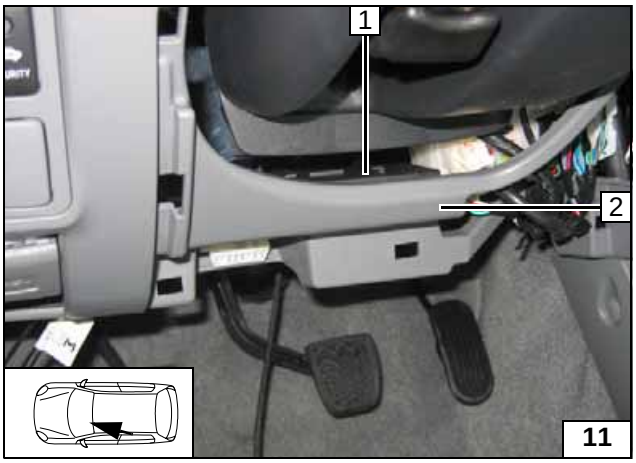
**Connecting A/C control panel**




## Digital timer and Summer / winter switch option

**1** Digital timer
**2** Centre console
**3** Summer/winter switch

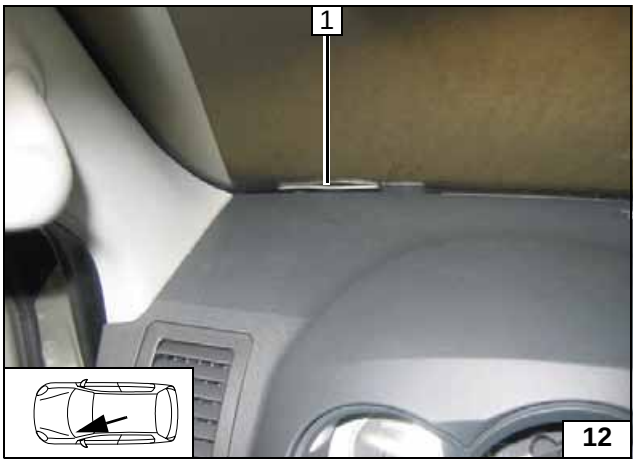
**Mounting digital timer**




## Remote option (Telestart)

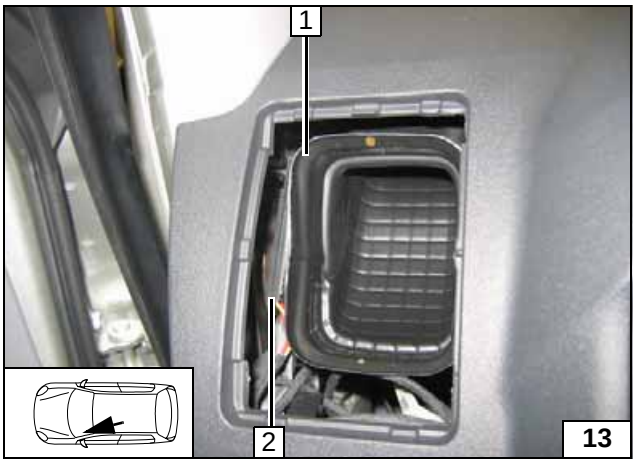
**1** Receiver, included double-sided adhesive tape
**2** Lower instrument panel trim on left

**Mounting receiver**




**1** Antenna

**Mounting antenna**




**Only with Telestart T100 HTM**

**1** Ventilation duct on left
**2** Temperature sensor, included double-sided adhesive tape

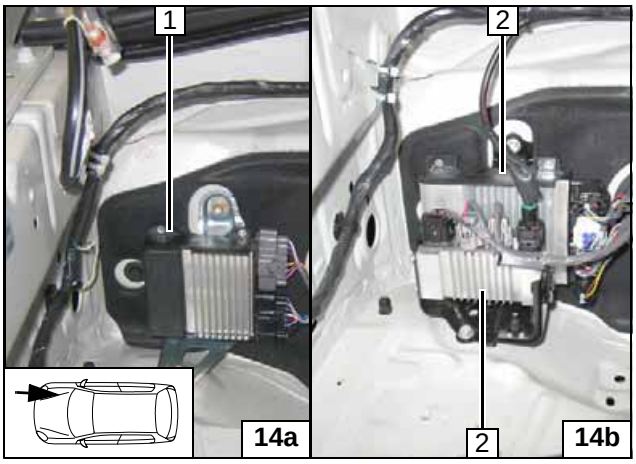
**Mounting temperature sensor**

## Preparing installation location

Dismantle control unit with bracket. Bolts will be reused.

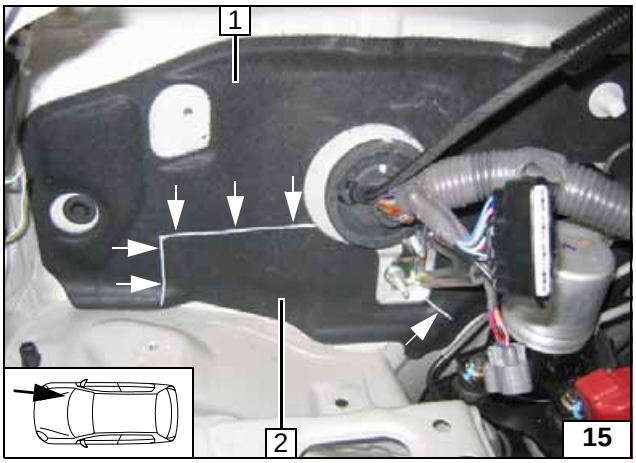
**1** Control unit of vehicle up to MY 2011
**2** Control unit double, vehicle up to MY 2011

**Removing control unit**




**1** Original vehicle insulation mat
**2** Discard section

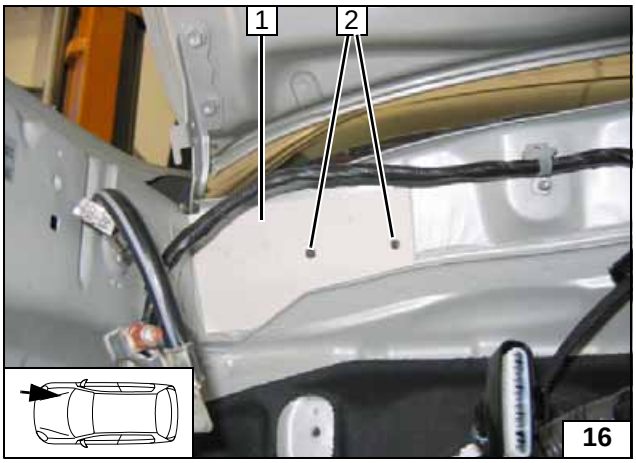
**Cutting out insulation mat**




When drilling, watch out for wires located behind.

**1** Cut out template and lay on
**2** Copy hole pattern, 7 mm dia. hole [2x]

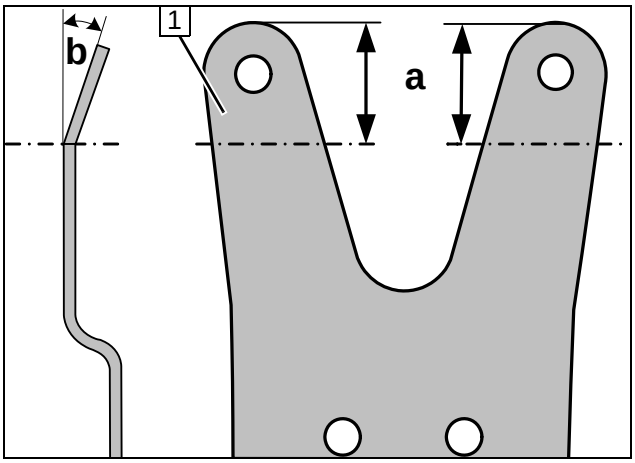
**Copying hole pattern**

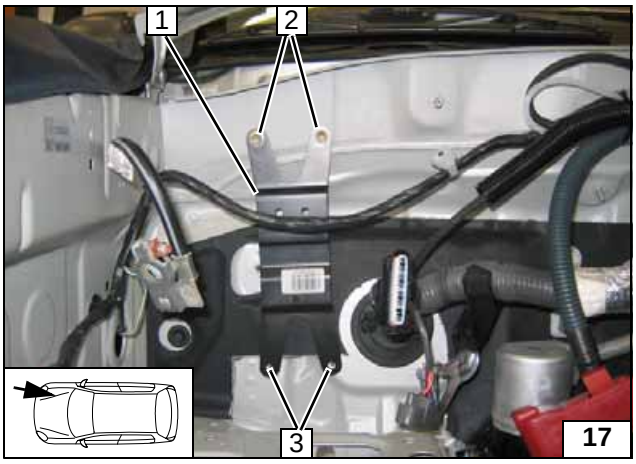



Bend bracket of heater **1** as shown.

**a** = 20mm
**b** = approx. 20°

**Preparing bracket**

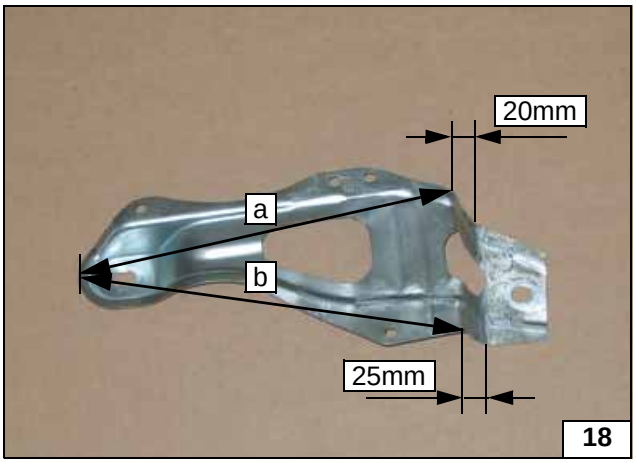





When drilling, watch out for wires located behind.

**1** Loosely mount bracket
**2** Original vehicle M6 bolts [2x], M6 flanged nut [2x]
**3** Copy hole pattern [2x]
Remove bracket, drill 9.1 mm dia. hole [2x], install rivet nuts [2x]

**Copying hole pattern**

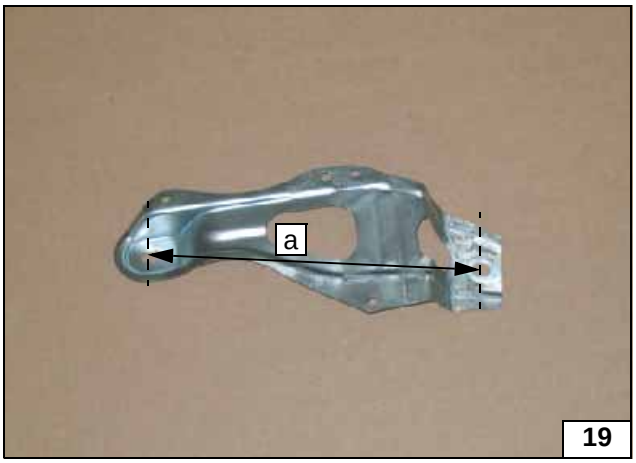



**Vehicles up to MY 2011**

Smooth bracket of control unit on 90° elbow and mould according to template.

a = 170 mm
b = 175 mm

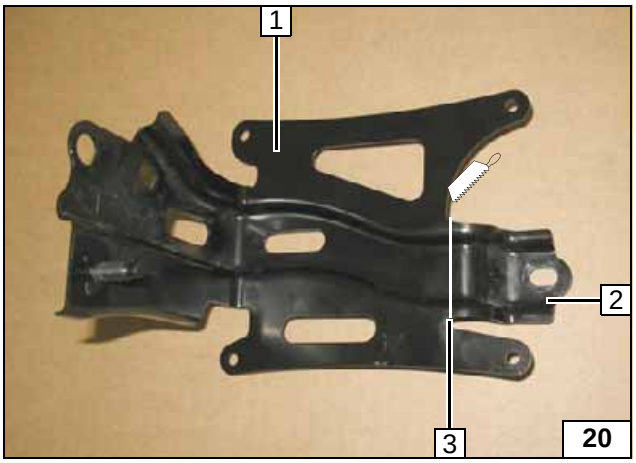
**Moulding bracket of control unit**




The distance **a** between the two holes must be checked after the moulding process.

a = 170 mm

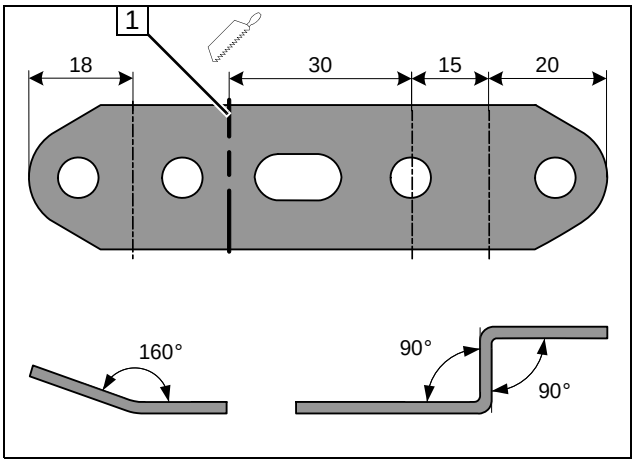
**Moulding bracket of control unit**




**Vehicles from MY 2011**

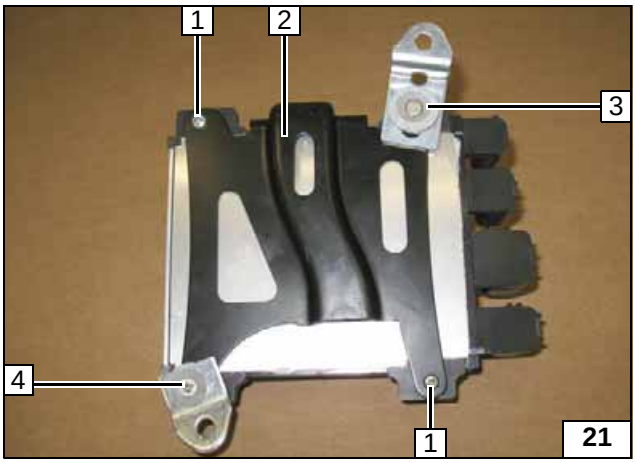
Cut bracket of control unit **1** at marking **3**, discard section **2**

**Processing bracket of control unit**




Cut perforated bracket at position **1** and bend both parts as shown.

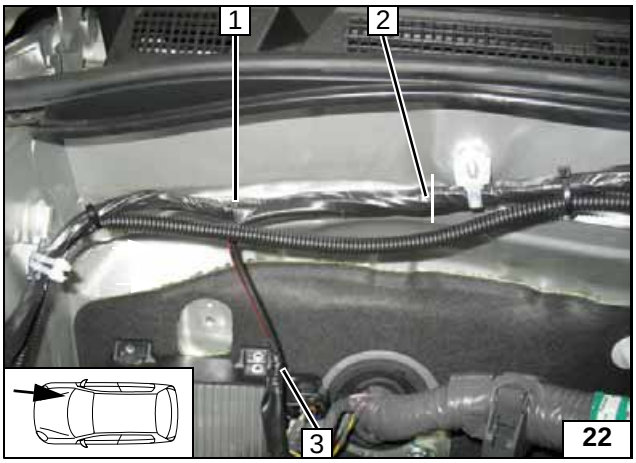
**Preparing perforated bracket**




Position a 5mm shim at position **4** between perforated bracket and bracket of control unit **2**.

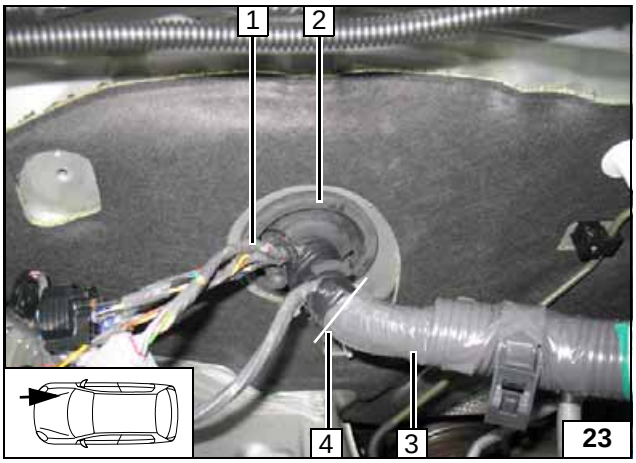
**1** Original vehicle bolts [2x]
**3** M4x12 bolt, 5.3 mm dia. large diameter washer; 7.4 mm dia. large diameter washer; perforated bracket, existing threaded hole
**4** M4x16 countersunk head screw, 5.3 mm dia. large diameter washer; perforated bracket, 5 mm shim, existing threaded hole

**Premounting bracket of control unit**



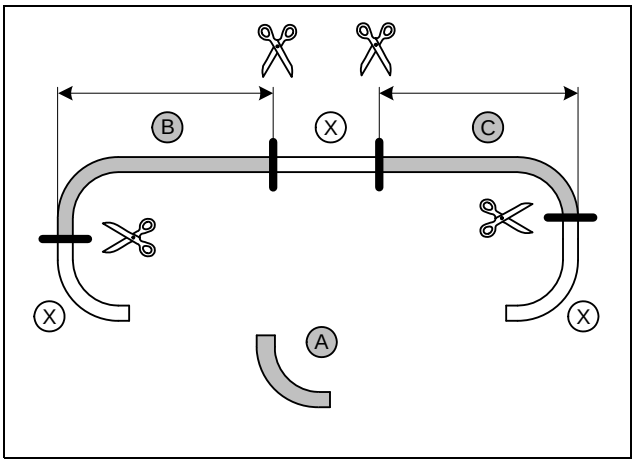

Unwind original vehicle wiring harness **1** up to marking **2** and cut out wire **3**. Subsequently, tie back wiring harness and wire with insulating tape.

**Processing wiring harness**




Unwind wiring harness **3** from marking **4** up to grommet **2** and cut out wires of control unit **1** as shown. Rewind original vehicle wiring harness with insulating tape.

**Processing wiring harness**



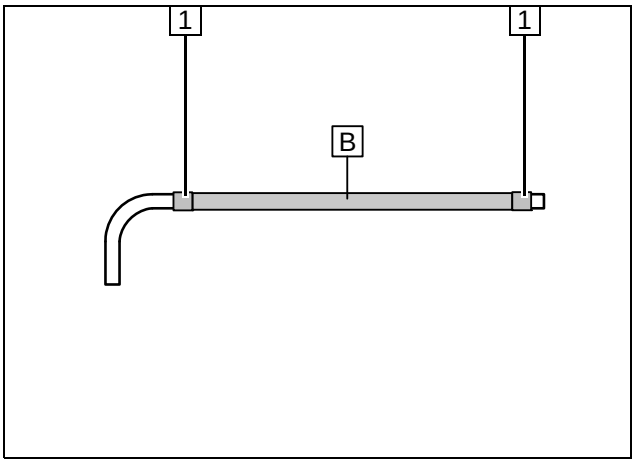

## Preparing heater

**Vehicles up to MY 2009**

See installation of coolant circuit to differentiate between the engine versions.

Discard section **X**.
Hose **A** = 90° 15x18 mm dia. moulded hose.
Hose **B** = 600
Hose **C** = 600

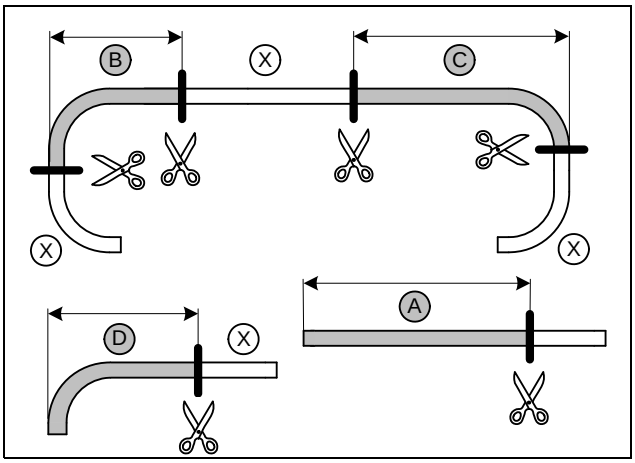
**Cutting coolant hoses to length**




Cut braided protection hose to length and push onto hose **B**. Cut heat shrink plastic tubing in half, push on and shrink.

**1** Heat shrink plastic tubing cut in half

**Preparing coolant hoses**

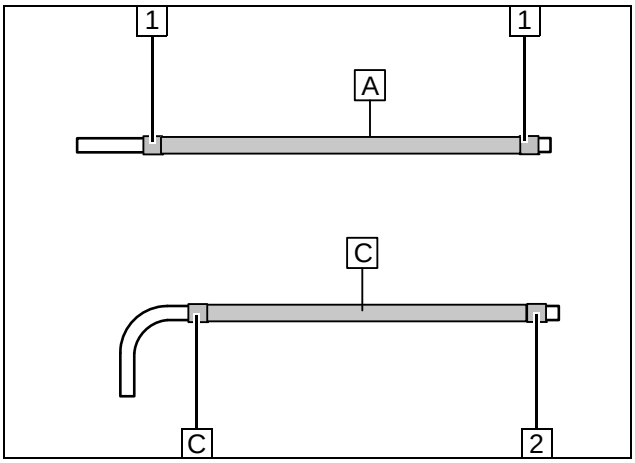



**Vehicles from MY 2009**

See installation of coolant circuit to differentiate between the engine versions.

Discard section **X**.
Hose **A** = 15 mm dia, 1170 mm length
Hose **B** = 100
Hose **C** = 680
Hose **D** = 90°, 15 mm dia., 190 mm length

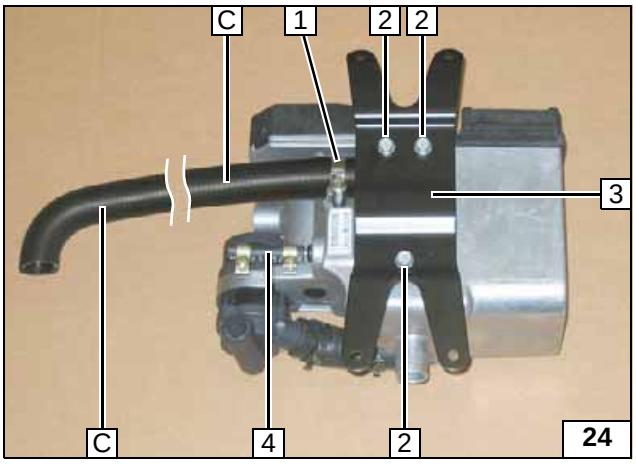
**Cutting coolant hoses to length**




Push braided protection hoses onto hose **A** and **C** and cut to length. Cut heat shrink plastic tubing to length.

**1** 50 mm heat shrink plastic tubing [4x]

**Preparing coolant hoses**

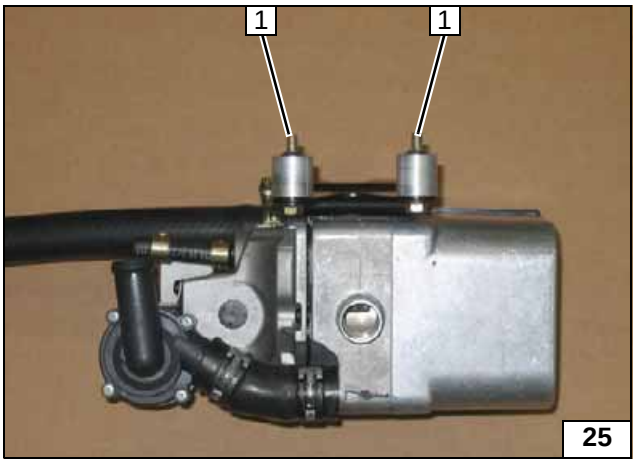



**All vehicles**

Align hose **C** as shown. Ejot screws, tightening torque 10 Nm.

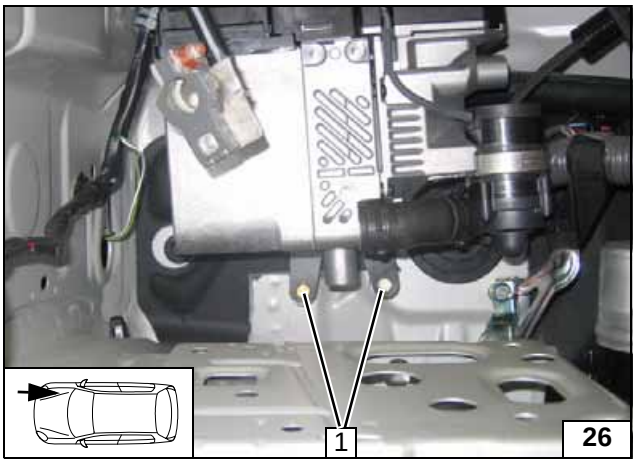
**1** 27 mm dia. hose clamp
**2** Ejot screw [3x]
**3** Bracket
**4** Hose section, 10 mm dia. hose clamp [2x]

**Premounting heater**




**1** M6x35 bolt, spring lock washer, 20 mm spacer, pin lock [2x each]

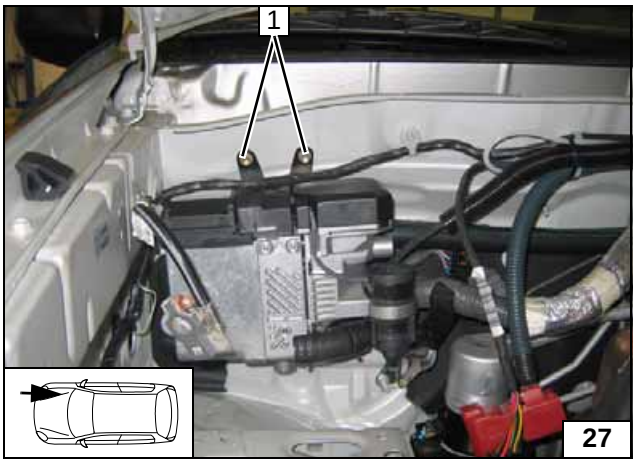
**Premounting heater**




## Installing heater

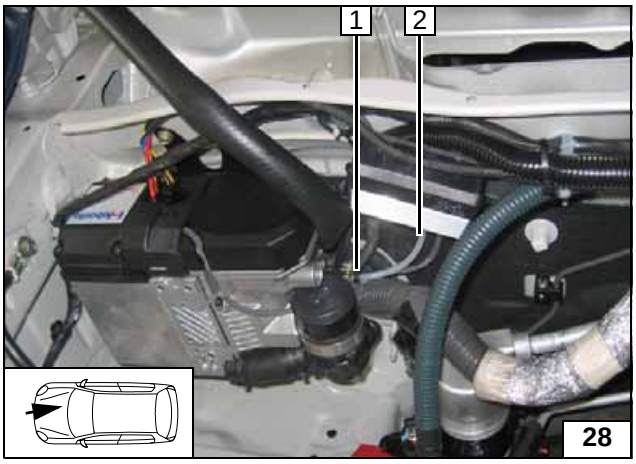
**1** Premounted M6x35 bolt [2x] in M6 rivet nut [2x]

**Mounting heater**



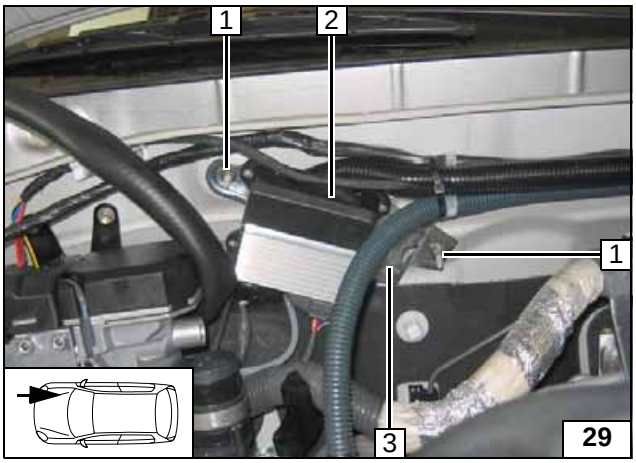

**1** Original vehicle M6 bolt [2x], large diameter washer [2x], flanged nut [2x]

**Mounting heater**




**1** Premounted hose section, 10 mm dia. hose clamp
**2** Fuel line

**Connection on heater**

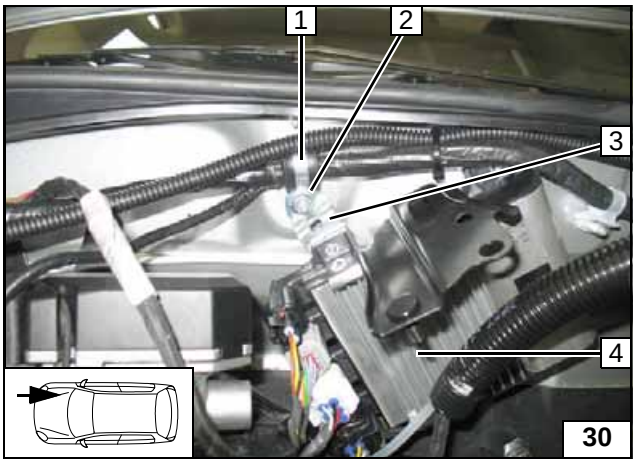



**Vehicles up to MY 2011**

Check position of all components and adjust if necessary. Check that they have freedom of movement.

**1** Original vehicle stud bolt, M6 flanged nut [2x each]
**2** Control unit
**3** Moulded bracket of control unit

**Mounting control unit**

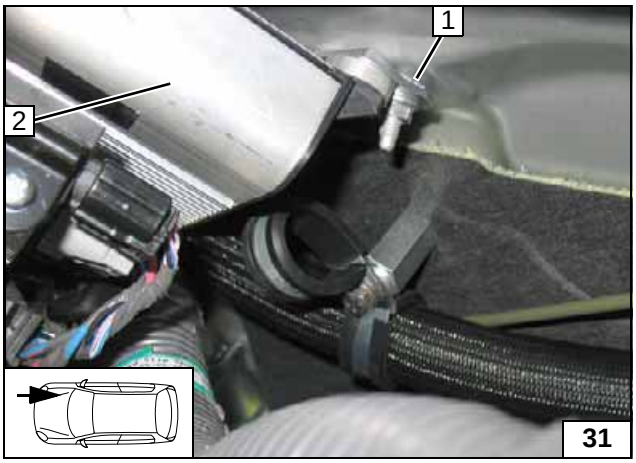



**Vehicles from MY 2012**

Remove original vehicle bolt at position **1** and discard.

**1** 15 mm dia. rubber-coated p-clamp
**2** Original vehicle stud bolt, M6 flanged nut
**3** Perforated bracket
**4** Control unit

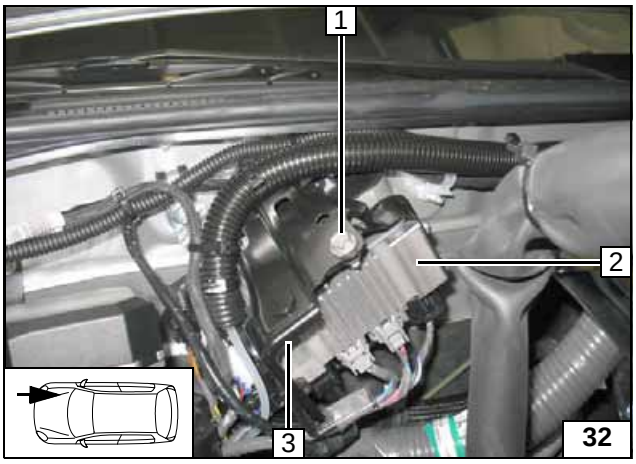
**Mounting control unit**




Check position of all components and adjust if necessary. Check that they have freedom of movement.

**1** Original vehicle stud bolt, flanged nut
**2** Control unit

**Mounting control unit**




Check position of all components and adjust if necessary. Check that they have freedom of movement.

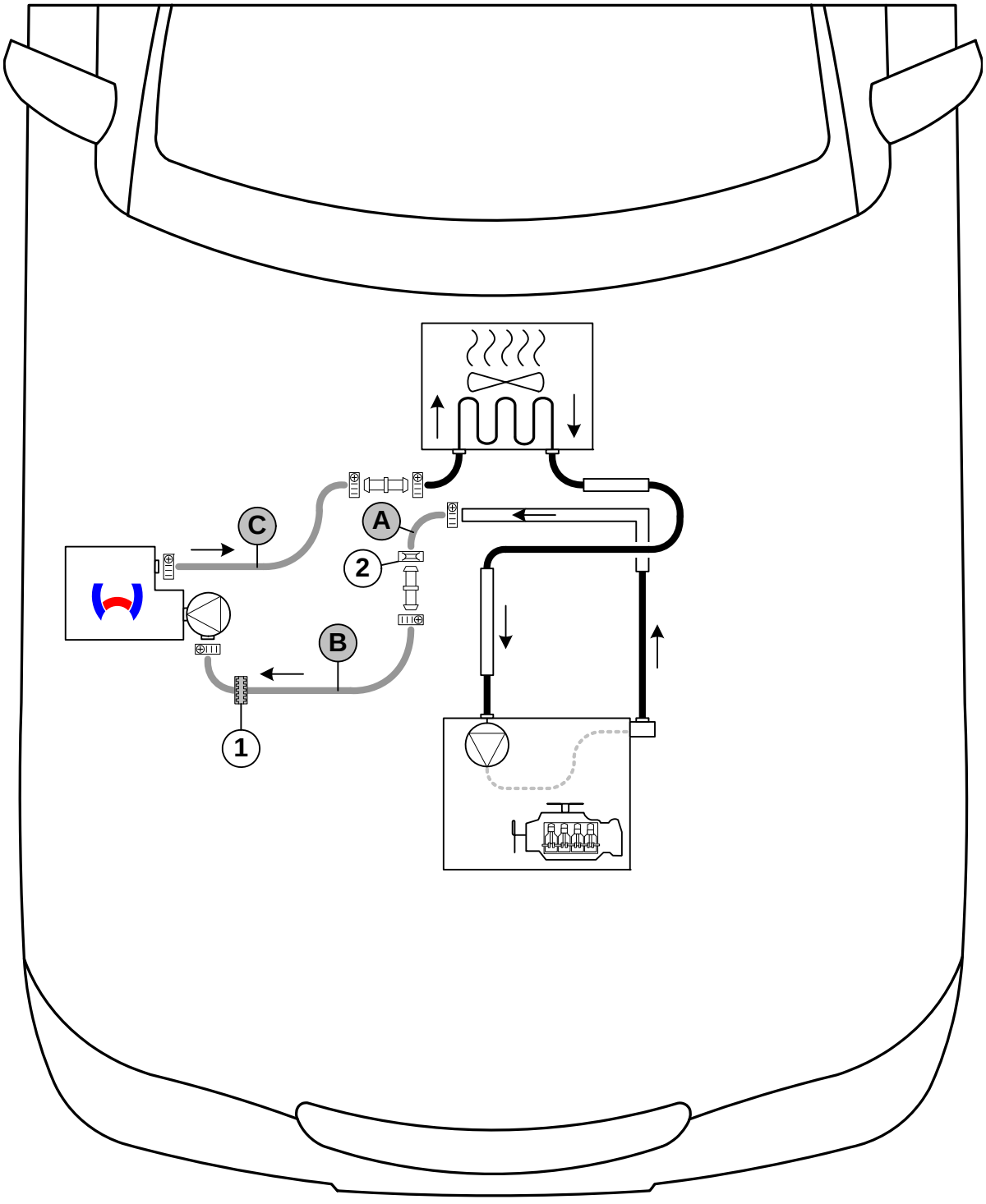
**1** Original vehicle bolt, flanged nut
**2** Control unit
**3** Original vehicle flanged nut

**Mounting control unit**

## Coolant circuit

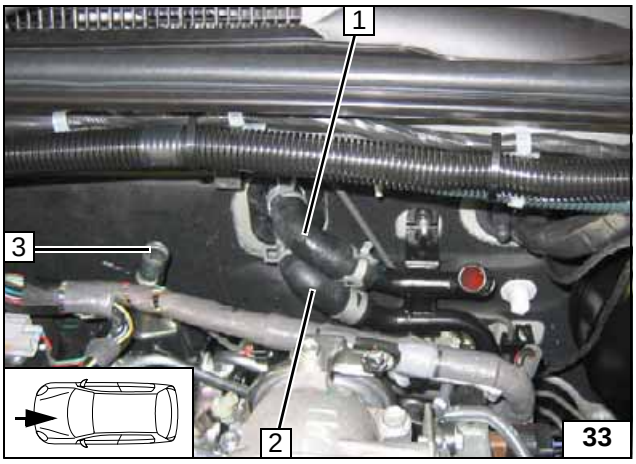
### Vehicles up to MY 2009

**WARNING!**
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.
The connection should be "inline" based on the following diagram:




**Hose routing diagram**

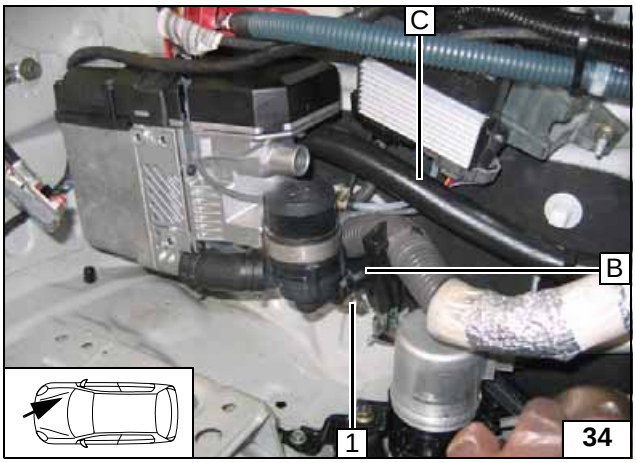
All clamps without a specific designation are 20-27 mm dia. hose clamps. **1** = Black (sw) rubber profile
All connecting pipes = 18x20 mm dia. **2** = Original vehicle spring clip




Dismantle coolant hoses **1** and **2**. Hose at position **3** already removed. Hoses and original vehicle hose clamps will be reused

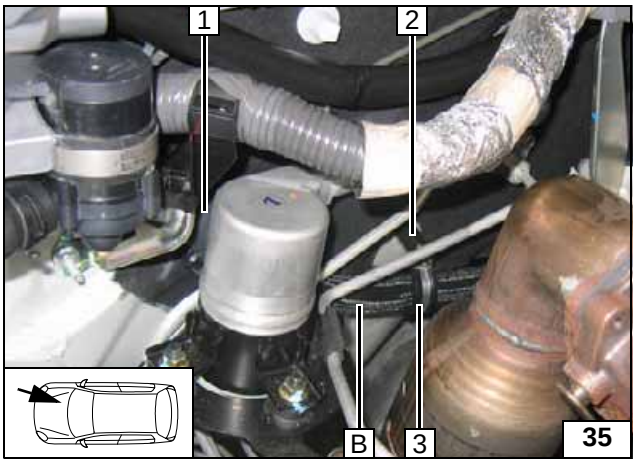
**1** Hose for heat exchanger outlet
**2** Hose on heat exchanger inlet

**Preliminary Work**



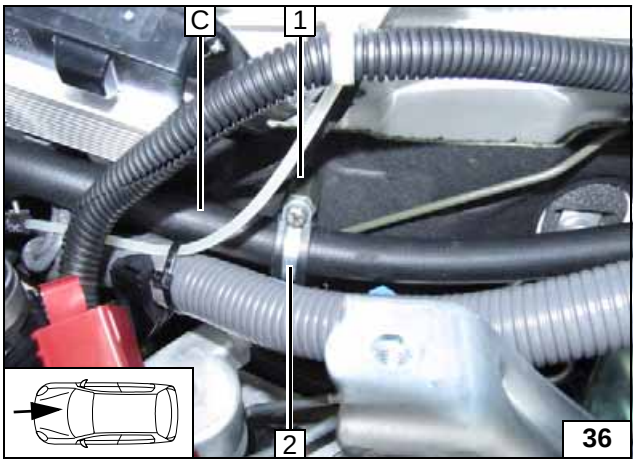

**1** Hose clamp

**Connection on heater**




**1** Black (sw) rubber isolator
**2** Original vehicle M6 stud bolt, 40mm spacer nut
**3** M6x20 bolt, spring lock washer, 29mm rubber-coated p-clamp

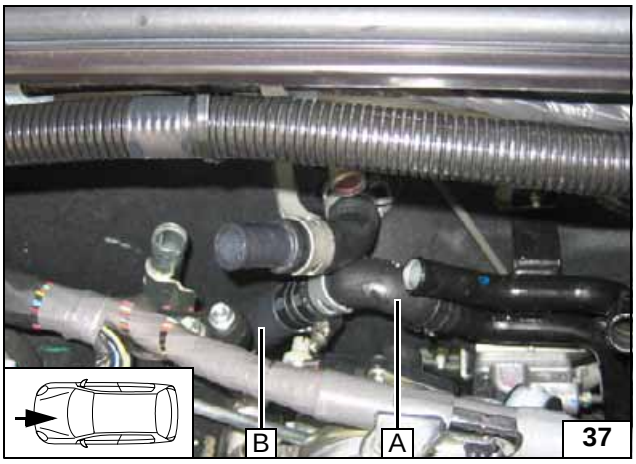
**Routing in engine compartment hose B**




Position large diameter washer at position **1** between spacer nut and car body.

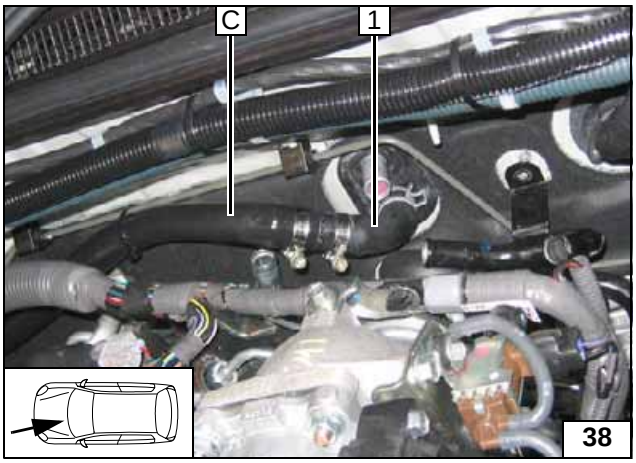
**1** Original vehicle stud bolt, M6x30 spacer nut
**2** M6x20 bolt, spring lock washer, 29mm dia. rubber-coated p-clamp

**Routing in engine compartment hose C**



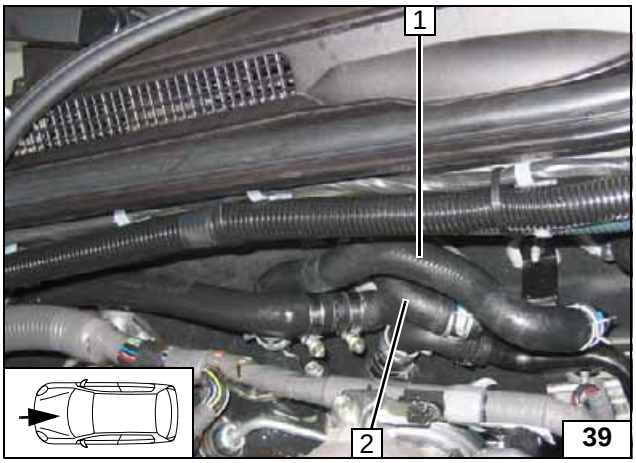

**A** Included 90° moulded hose with 15mm dia. line on engine outlet

**Connection on engine outlet**




Original vehicle 90° elbow **1** turned by 180° and shortened by 20mm on the heat exchanger inlet side. Connect original vehicle 90° elbow**1** with 90° elbow of hose **C**

**Connection on heat exchanger input**

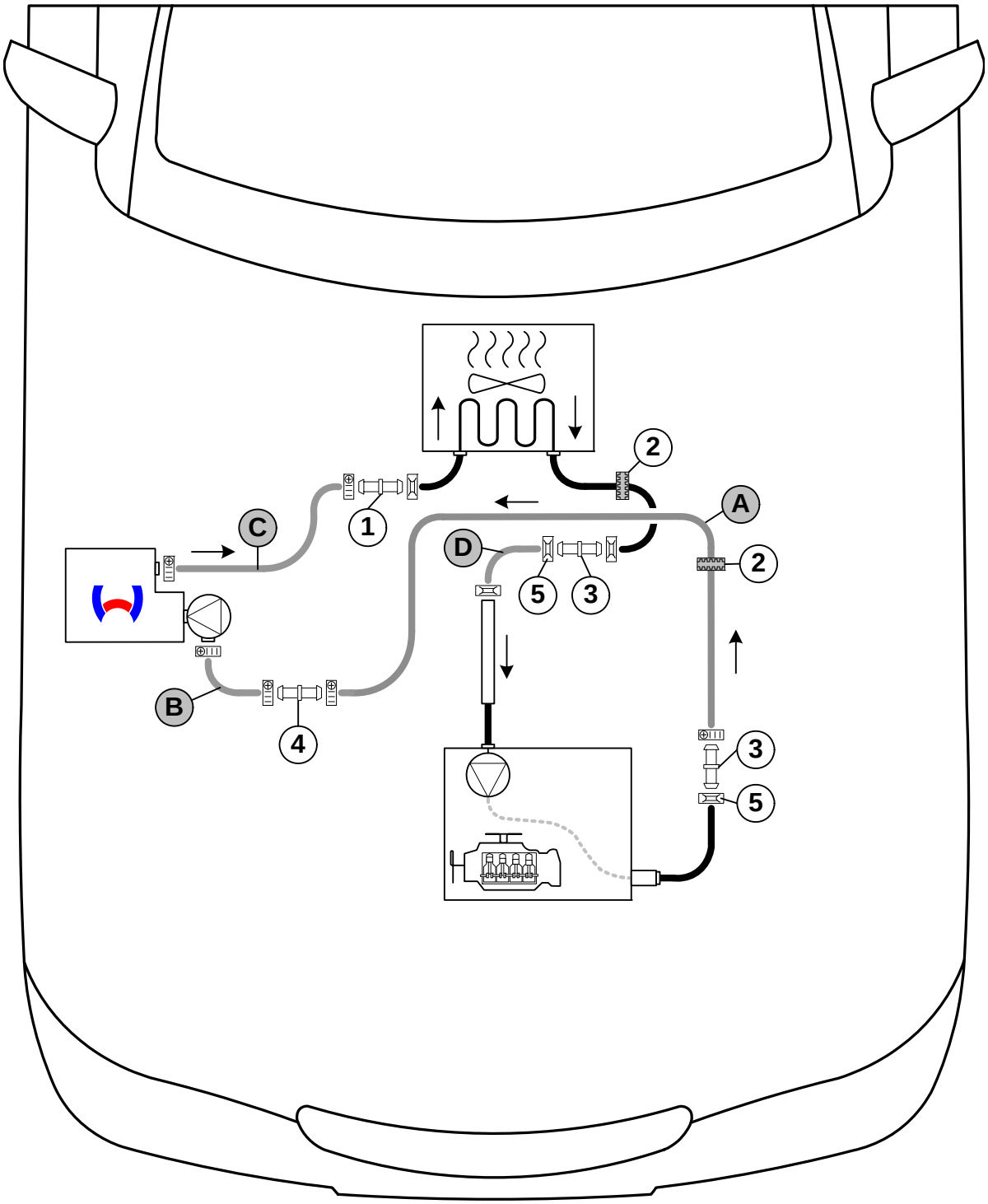



Fill the coolant hoses with coolant before connecting. Mount hose on heat exchanger outlet **2**. Mount coolant hose between heat exchanger outlet and engine inlet **1** turned laterally to the original installation position.

**Mounting original vehicle hose**

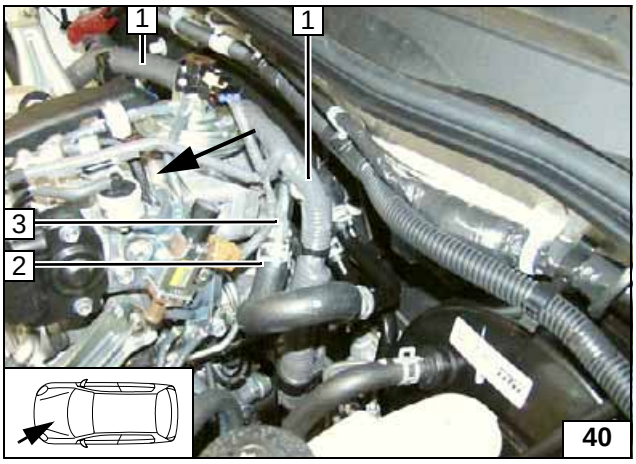
**Vehicles from MY 2009**

**WARNING!**
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.
The connection should be "inline" based on the following diagram:




**Hose routing diagram**

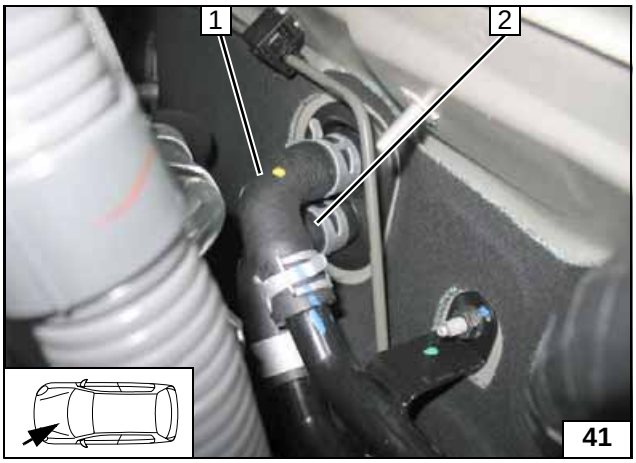
All clamps without a specific designation are 20-27mm dia. hose clamps. **1** = Connecting pipe = 18x20mm dia. **2** = Black (sw) rubber profile. **3** = Connecting pipe = 15x18mm dia. **4** = Connecting pipe = 15x20mm dia. Spring clips not specified = Original vehicle spring clips. **5**= 22mm dia. spring clip




Detach wiring harness **1** and place on the engine in the direction of arrow.

**2** Pull out hose
**3** Remove coolant pipe with hose on engine inlet, and discard

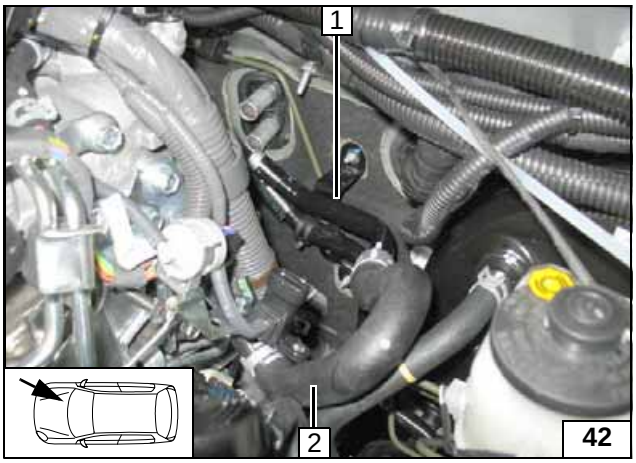
**Preliminary Work**




Remove hoses **1** and **2**. Original vehicle hose clips will be reused partially.

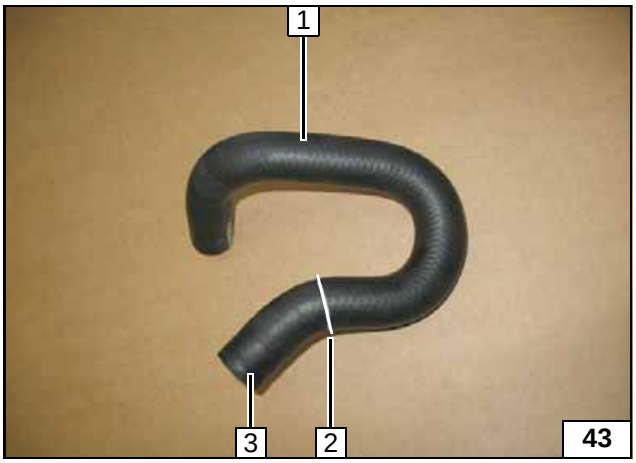
**1** Hose for heat exchanger outlet
**2** Hose on heat exchanger inlet

**Preliminary Work**



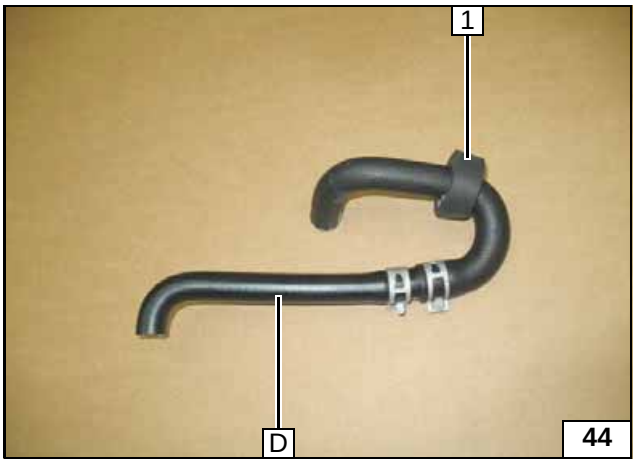

**1** Dismantle pipe group and discard
**2** Dismantle moulded hose, will be required again.

**Preparing coolant routing**



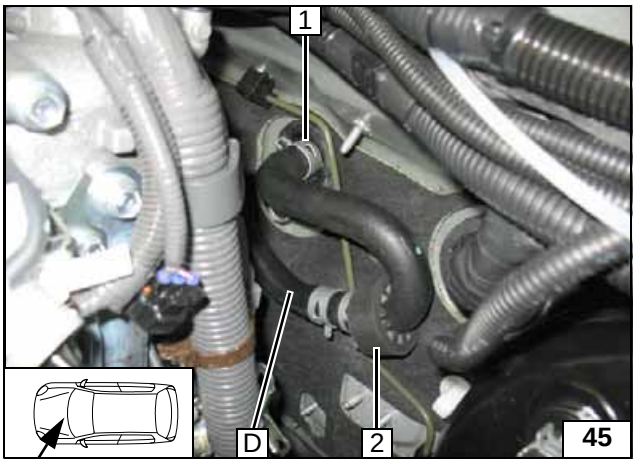

Cut out original vehicle moulded hose **1** at cutting point **2**. Discard section **3**.

**Preparing moulded hose**



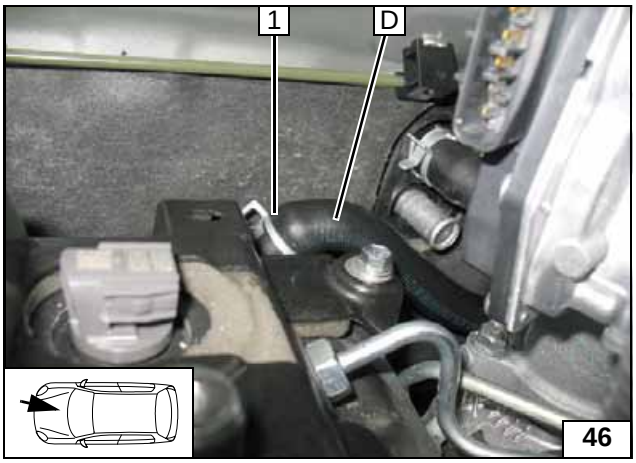

**1** Black (sw) rubber isolator

**Preparing moulded hose**




**1** Heat exchanger outlet
**2** Position black (sw) rubber isolator

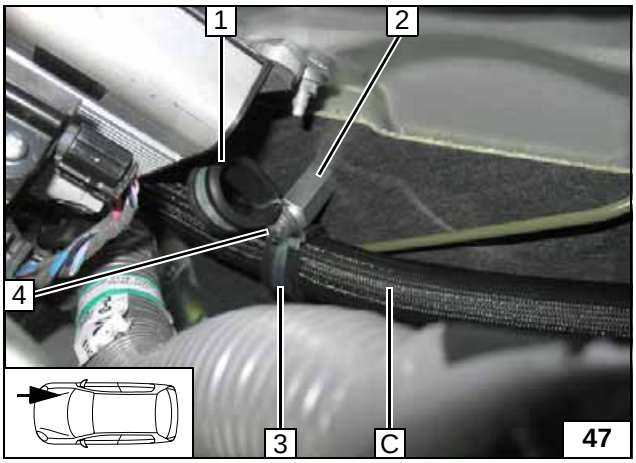
**Connection on heat exchanger output**




Check routing of hose **D** and hose of heat exchanger inlet, correct if necessary.

**1** Connection piece for engine inlet

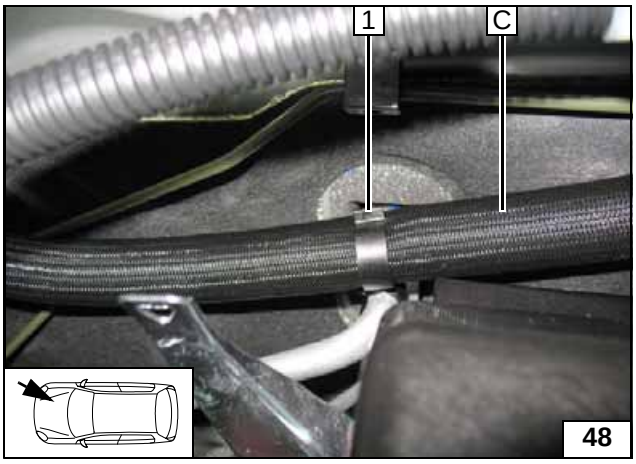
**Connection to engine inlet**




Check position of all components and adjust if necessary. Check that they have freedom of movement.
Position large diameter washer at position **2** between spacer nut and insulation mat.

**1** 25 mm dia. rubber-coated p-clamp
**2** Original vehicle stud bolt, large diameter washer, M6x40 spacer nut
**3** 29 mm dia. rubber-coated p-clamp
**4** M6x16 bolt, spring lockwasher

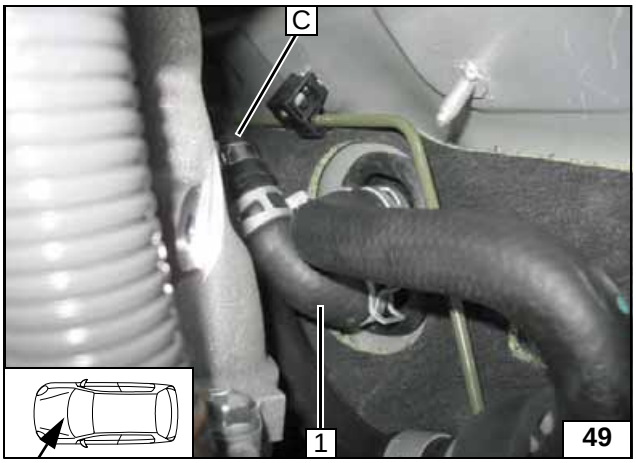
**Routing hose C**




Align hose. Ensure sufficient distance from neighbouring components, correct if necessary.

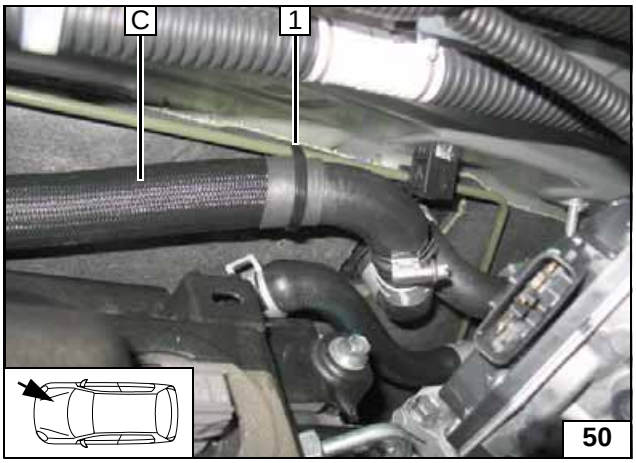
**1** Insert spacer bracket between hose **C** and A/C line

**Routing hose C**



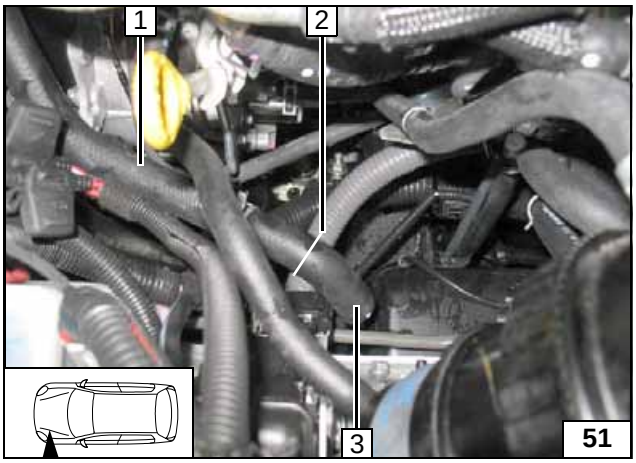

**1** Hose of heat exchanger inlet shortened on the heat exchanger inlet side by 20 mm

**Connection on heat exchanger input**



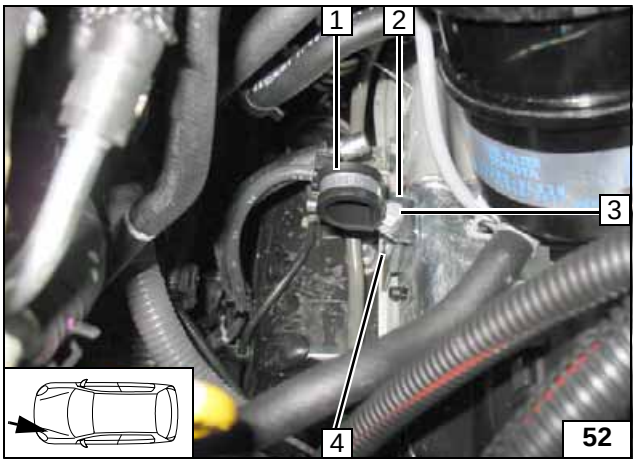

Fasten hose to brake line with cable tie **1**.

**Routing hose C**



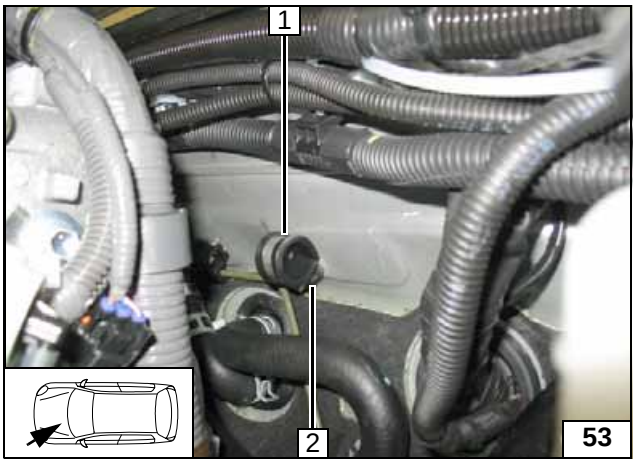

Cut out hose on engine outlet **1** at cutting point **2**. Discard section **3**.

**Preparing routing of hose A**



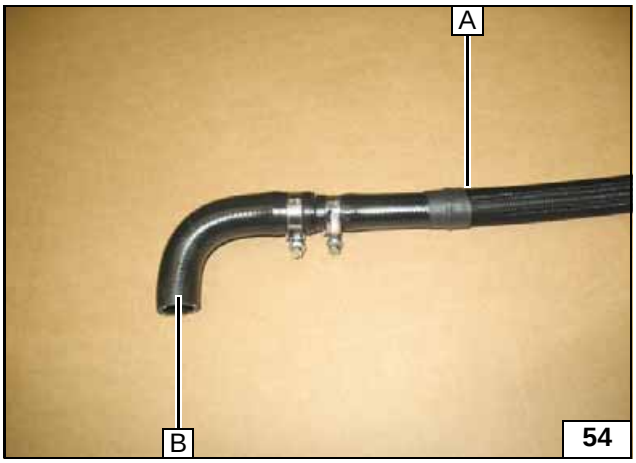

**1** 25 mm dia. rubber-coated p-clamp
**2** Angle bracket
**3** M6x20 bolt, flanged nut
**4** Original vehicle bolt

**Preparing routing of hose A**

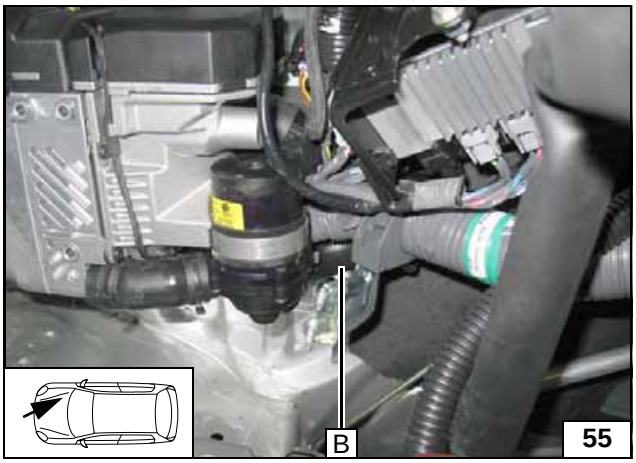



**1** 25 mm dia. rubber-coated p-clamp
**2** Original vehicle stud bolt, flanged nut

**Preparing routing of hose A**

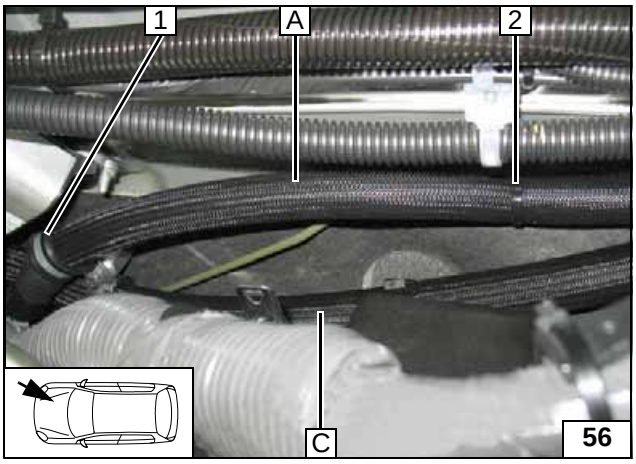



**Preparing hose A**



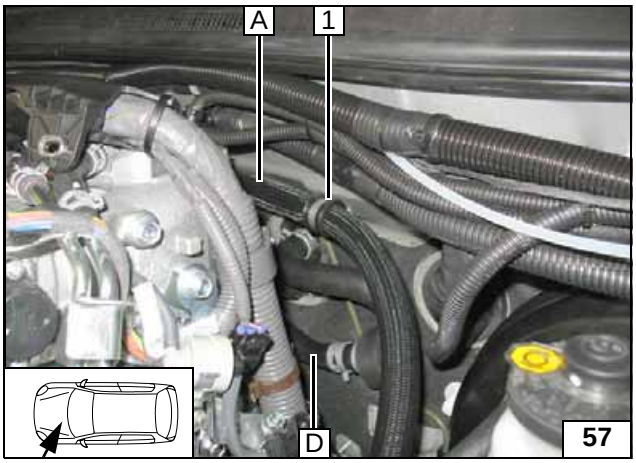

Ensure sufficient distance from neighbouring parts.

**Connection on heater**



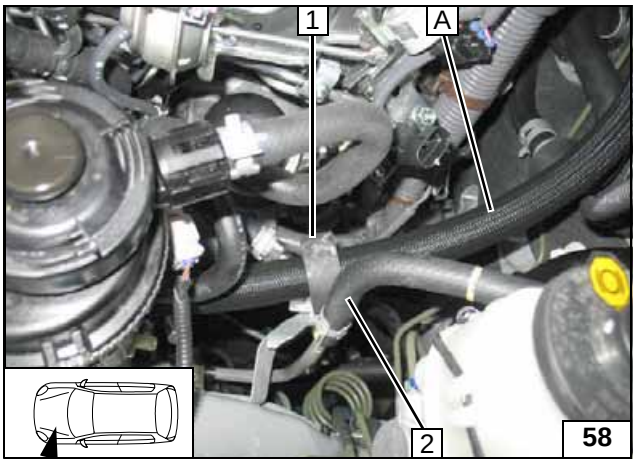

**1** 25 mm dia. rubber-coated p-clamp
**2** Cable tie on brake line

**Routing hose A**




**1** 25 mm dia. rubber-coated p-clamp

**Routing hose A**

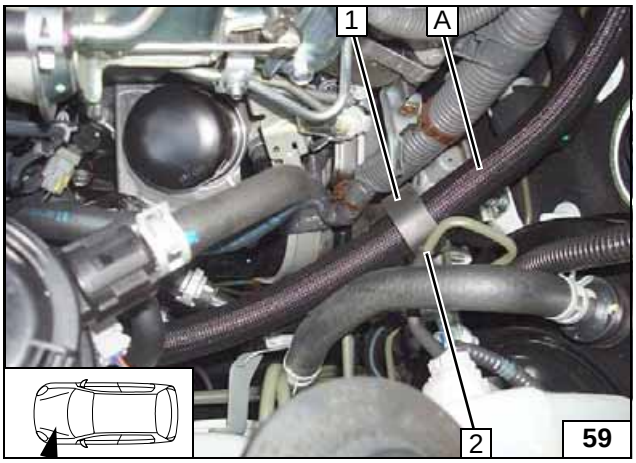



The positioning of the black (sw) rubber isolator depends on the equipment.

**Version A**

Position black (sw) rubber isolator **1** on original vehicle wire **2**.

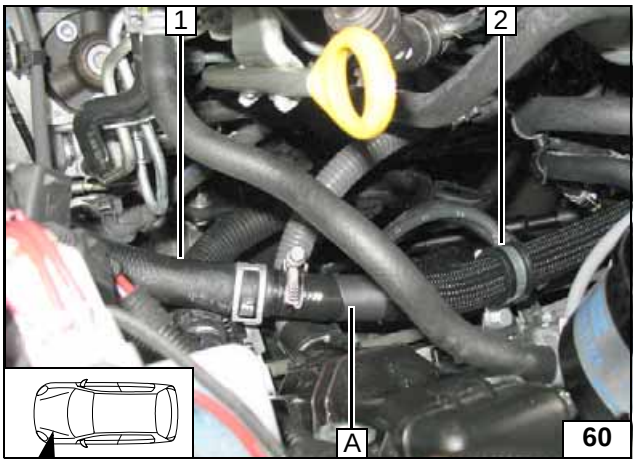
**Routing hose A**




**Version B**

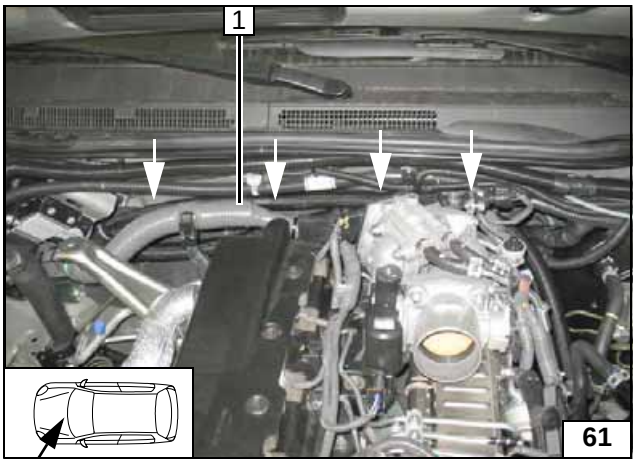
Position black (sw) rubber isolator **1** on original vehicle wire **2**.

**Routing hose A**



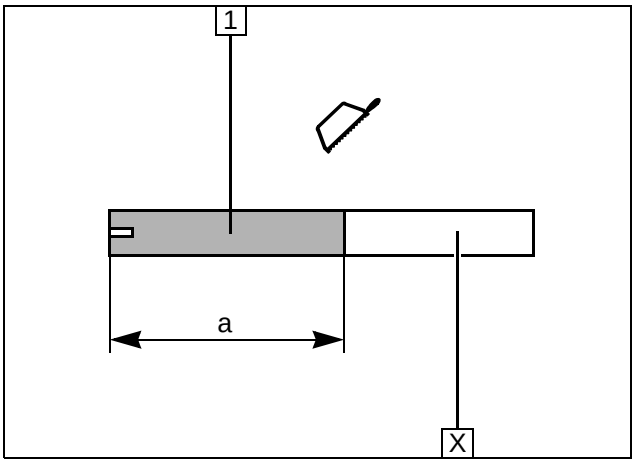

**1** Hose of engine outlet
**2** 25 mm dia. rubber-coated p-clamp

**Connection to engine outlet**




Mount original vehicle wiring harness **1**.
Check hose installation at rub points.

**Checking hose installation**

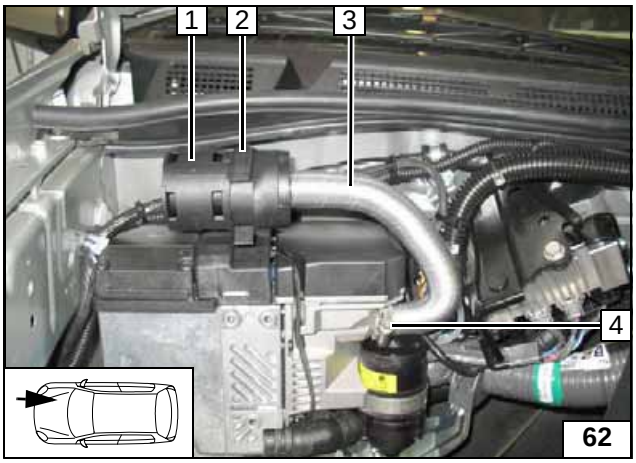



## Combustion air

**1** Combustion air pipe
a = 220mm

Discard section **X**

**Cutting combustion air pipe to length**




Puncture perforation for hole on cover of heater.

**1** Combustion-air intake silencer
**2** Retaining clip, in prestamped hole
**3** Combustion-air intake pipe
**4** 27 mm dia. hose clamp

**Mounting intake pipe**

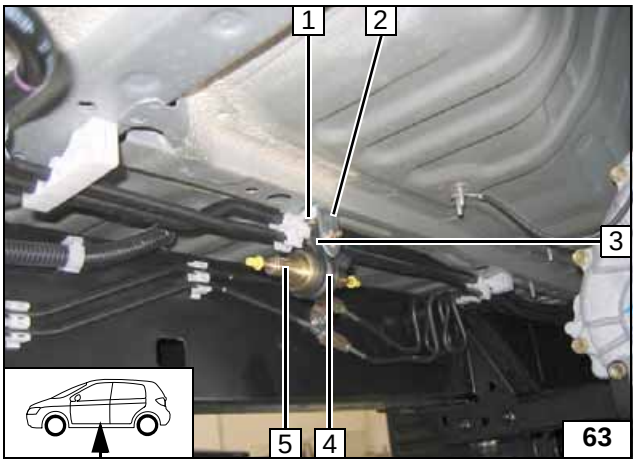
## Fuel

**CAUTION!**
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with an appropriate container.

Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

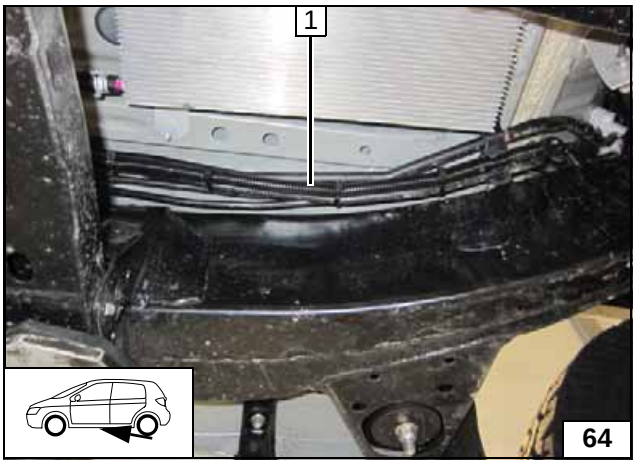
**WARNING!**
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.




**Installation location of metering pump**

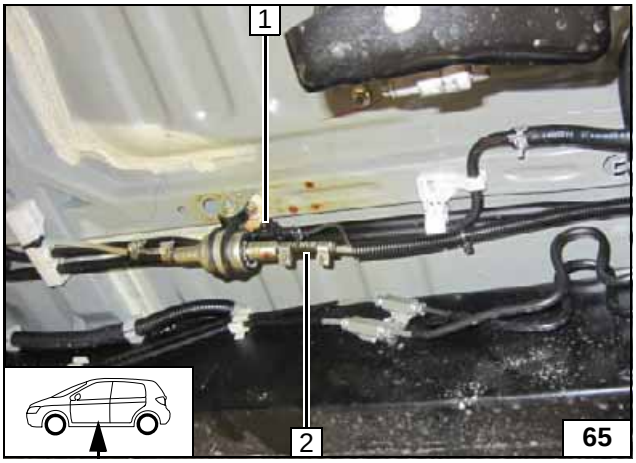
Ensure proper installation position of metering pump, see "Installation Instructions".
Installation location on right next to vehicle fuel tank.
Fuel line from heater on pressure side of metering pump [side with connector].

**1** Original vehicle bolt
**2** Angle bracket
**3** Silent block, flanged nut [2x]
**4** Rubber-coated p-clamp
**5** Metering pump



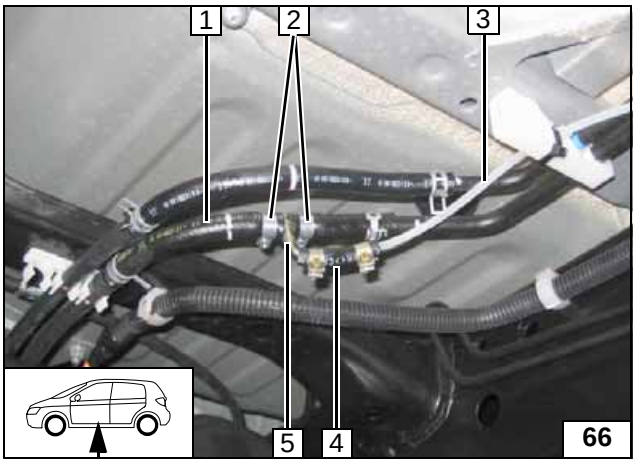

**Routing lines**

**1** Fuel line and wiring harness of metering pump in corrugated tube




**Connection to metering pump**

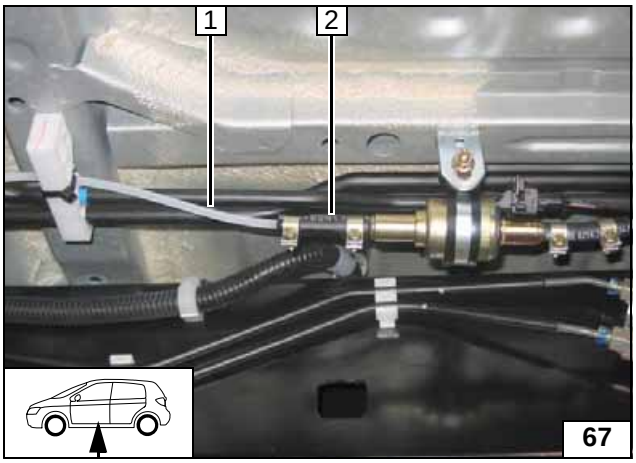
**1** Wiring harness for metering pump, wire sealing [2x], tab connector, connector housing
**2** Hose section, 10 mm dia. hose clamps [2x]




Disconnect fuel supply line.

**1** Fuel supply line
**2** 14 mm dia. hose clamps [2x]
**3** Fuel line
**4** Hose section, 10 mm dia. hose clamps [2x]
**5** 10x5x10 fuel standpipe

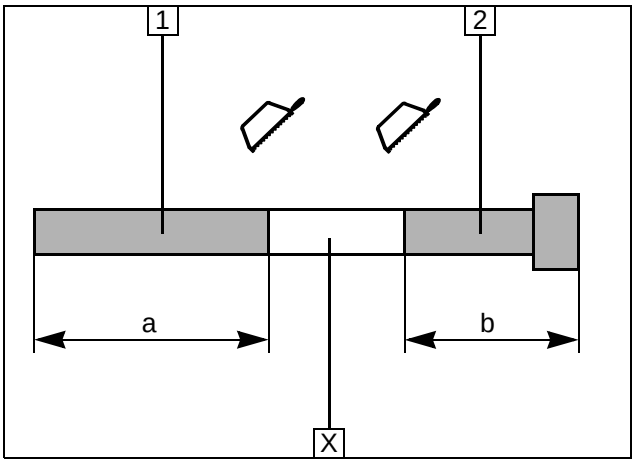
**Mounting fuel standpipe**




Fuel line from fuel standpipe on intake side of metering pump [side without connector]. Check the position of the components; adjust if necessary. Check that they have freedom of movement.

**1** Fuel line
**2** Hose section, 10 mm dia. hose clamp [2x].

**Connection to metering pump**

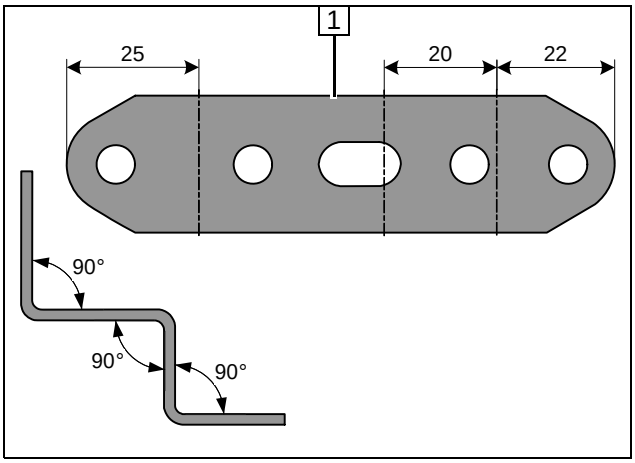



## Exhaust gas

**1** Exhaust pipe
a = 480
**2** Exhaust end section
b = 230

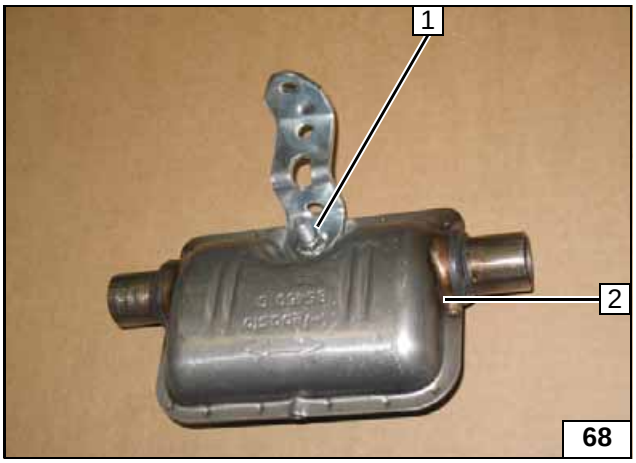
Discard section **X**

**Preparing exhaust pipe**



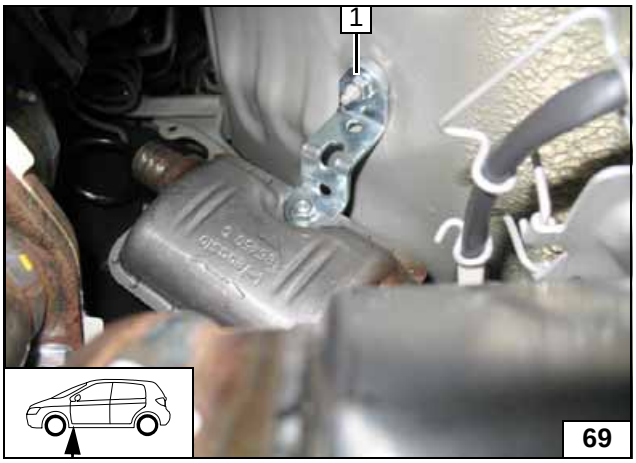

**1** Perforated bracket

**Preparing perforated bracket**




**1** M6x20 bolt, flanged nut
**2** Exhaust silencer

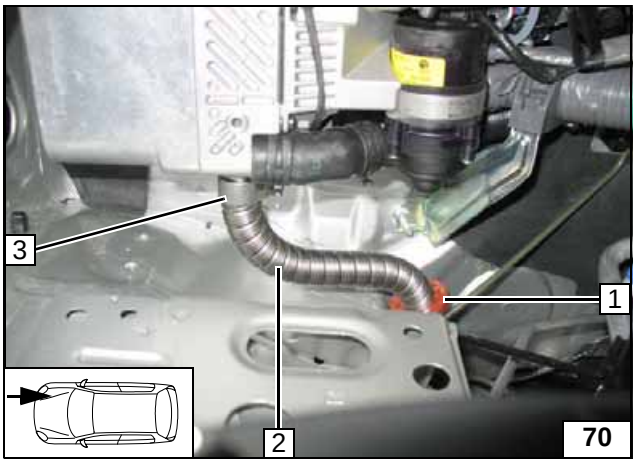
**Premounting silencer**




This and all the following figures show vehicle from MY 2012. Depending on the respective vehicle equipment, a heat guard plate can be present here. The installation of the silencer is identical.
Insert large diameter washer at position **1** between perforated bracket and car body.
Ensure sufficient spacing from neighbouring components.

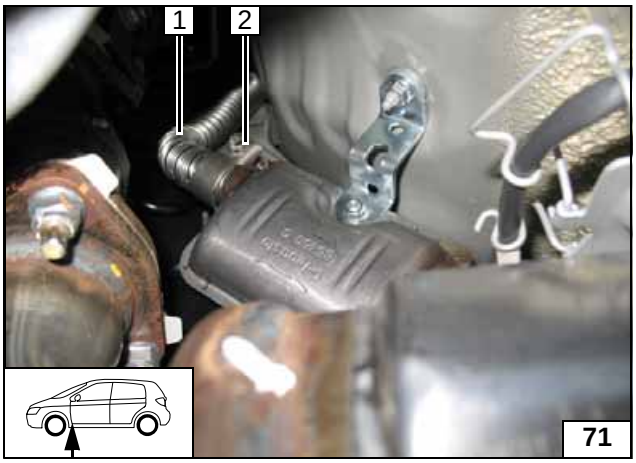
**1** Original vehicle stud bolt, large diameter washer, flanged nut

**Mounting silencer**



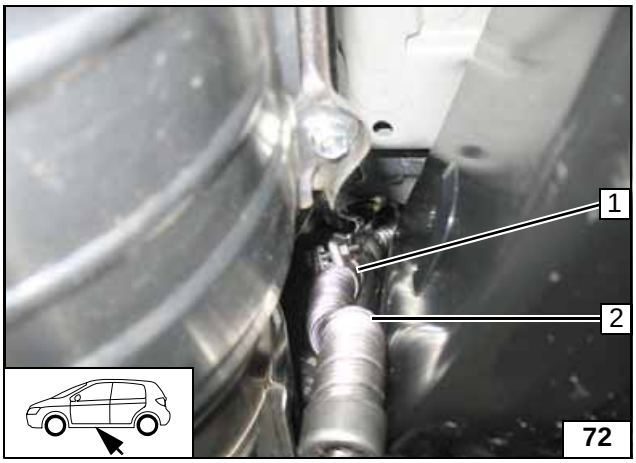

**1** Red (rt) rubber isolator
**2** Exhaust pipe
**3** Hose clamp

**Connection on heater**



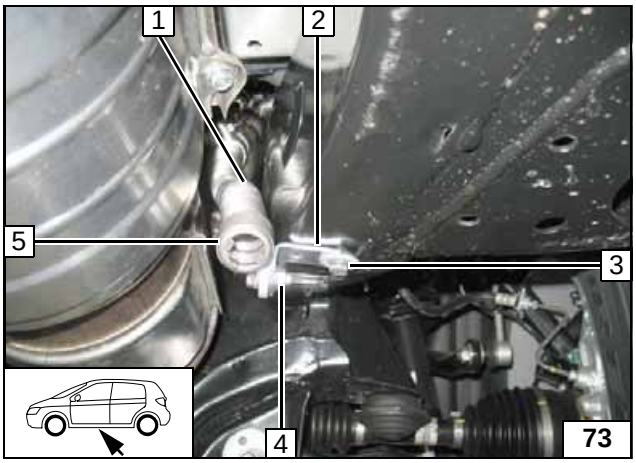

**1** Exhaust pipe
**2** Hose clamp

**Mounting exhaust pipe**




**1** Hose clamp
**2** Exhaust end section

**Mounting exhaust end section**




Drill out existing hole at position **3** to 9.1 mm dia., install rivet nut.

**1** Exhaust end section
**2** Angle bracket
**3** M6x20 bolt, spring lockwasher
**4** M6x20 bolt, 5 mm spacer, M6 flanged nut
**5** P-clamp

**Fastening exhaust end section.**

## Final Work

**WARNING!**
Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Set digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Mount "Switch off parking heater before refueling" signboard in area of filler neck.**
- **For initial startup and function check, see installation instructions**

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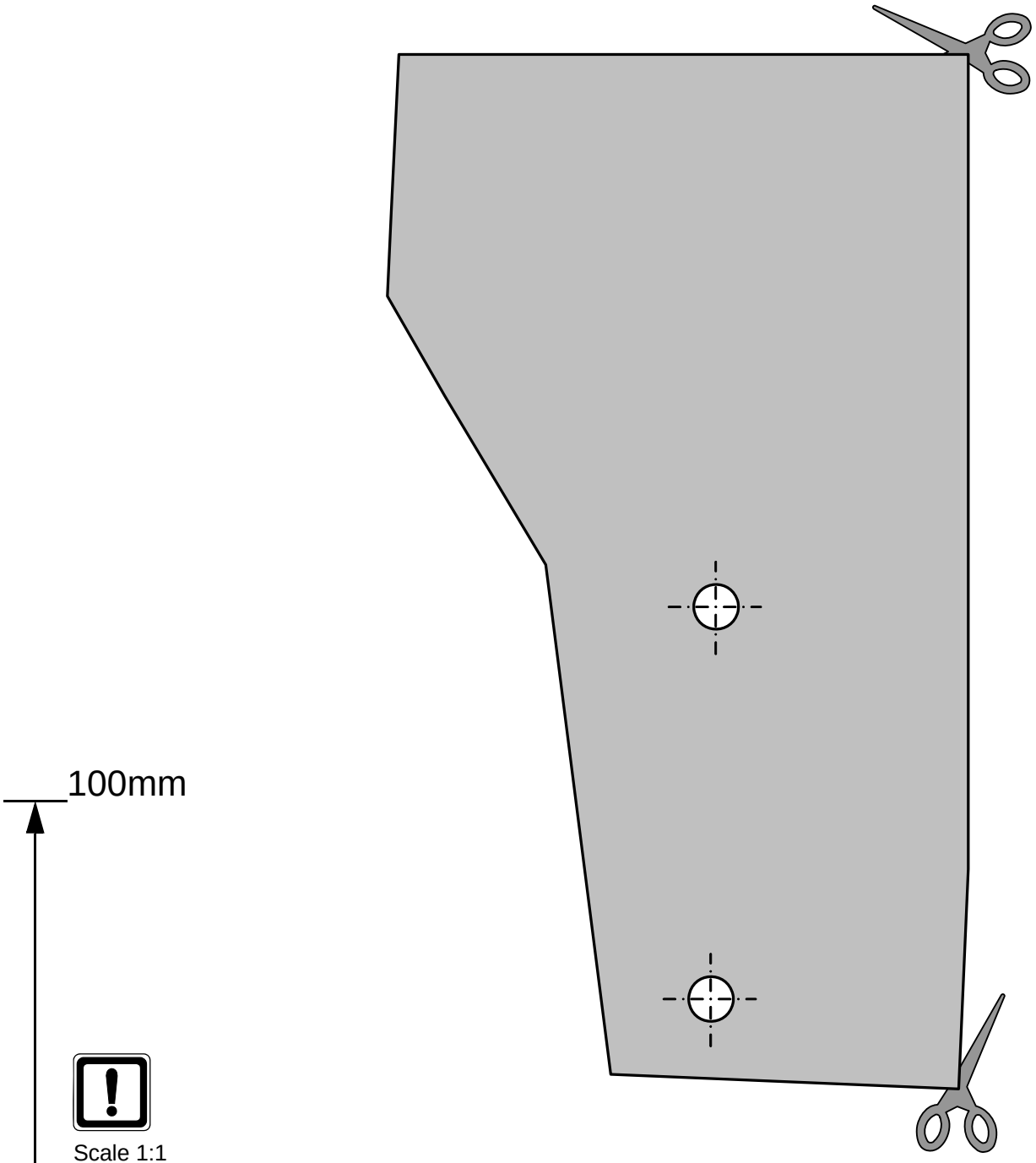
**Template for hole pattern of bracket**






Scale 1:1

Compare the size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

Correct major differences in the printer settings or request an original printout.

## Operating Instructions for End Customer

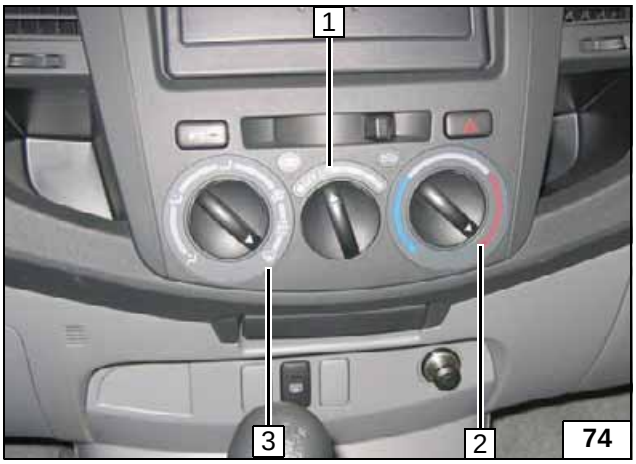
Please remove page and add to the vehicle operating instructions.

**Note:**
We recommend matching the heating time to the driving time.
Heating time = driving time
**Example:**
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring unit, if installed, must be deactivated in addition to vehicle settings for the heating cycle.
Please refer to the operating manual of the vehicle for instructions regarding deactivation.

Before parking the vehicle, make the following settings:

**Manual air-conditioning**




**1** Set fan to level "1" or max. "2"
**2** Set temperature to "max."
**3** Air outlet to windscreen

**Automatic air-conditioning**


**1** Set temperature to "max."
**2** Air outlet to windscreen
**3** Set fan level to 2